

## INVITATION TO BID

### COVER LETTER

ADDITIONAL INFORMATION BID #000494

#### PROCEDURE & BID SUBMISSION:

BIDDERS MUST PROPERLY COMPLETE AND SIGN BID, INCLUDING ALL REQUIRED ATTESTATIONS AND ADDENDA. ANY EXCEPTIONS TO THE ATTACHED TERMS AND CONDITIONS SHALL BE PRESENTED AT THE TIME OF THE BID SUBMISSION. NOTE THAT ANY EXCEPTIONS MAY RESULT IN A DISQUALIFIED BID IF THE AFOREMENTIONED EXCEPTIONS ARE IN CONFLICT WITH STATE GUIDELINES GOVERNING LSUHSC. BIDS MUST BE SIGNED BY A REPRESENTATIVE OF YOUR COMPANY AUTHORIZED TO ENTER INTO CONTRACTS ON BEHALF OF YOUR ORGANIZATION IN ACCORDANCE WITH LOUISIANA R.S. 39:1594

**PLEASE REVIEW THE INVITATION TO BID DOCUMENT AS CHANGES WERE MADE TO THE FORMAT AND CONTENT, PAY SPECIAL ATTENTION TO PAGE 2, "STANDARD TERMS & CONDITIONS", NUMBER 9 "SIGNATURE AUTHORITY".**

Alethea Craig  
Procurement Analyst-LSUHSC Auxiliary Enterprises

LSUNO Auxiliary Enterprises



BIDS WILL BE PUBLICLY OPENED:

June 19, 2023

02:00 PM

VENDOR NO. :  
SOLICITATION : 000494  
OPENING DATE : 06/19/2023

Return Sealed Bid to:  
Purchasing Department  
433 Bolivar St  
Room 623  
New Orleans LA 70112

BUYER : Craig, Alethea  
BUYER PHONE : 504/568-4691  
DATE ISSUED : 05/19/2023  
REQ. NO :  
FISCAL YEAR : 0

FY 24 NETWORK WIRING

To be Completed by Vendor:

BUSINESS NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
TAX ID NUMBER \_\_\_\_\_

\_\_\_\_\_ % CASH DISCOUNT FOR PROMPT PAYMENT IF MADE WITHIN THIRTY 30 DAYS. CASH DISCOUNTS FOR LESS THAN 30 DAYS OR LESS THAN 1% WILL BE ACCEPTED, BUT WILL NOT BE CONSIDERED IN DETERMINING AWARDS. ON INDEFINITE QUANTITY TERM CONTRACTS, CASH DISCOUNTS WILL BE ACCEPTED AND TAKEN BUT WILL NOT BE CONSIDERED IN DETERMINING AWARDS.

INSTRUCTION TO BIDDERS

1. READ THE ENTIRE BID (INCLUDING ALL TERMS AND CONDITIONS AND SPECIFICATIONS).

DIVERSE SUPPLIER

- (A) SUPPLIER UNDERSTANDS THAT LSU, AS THE STATE'S FLAGSHIP UNIVERSITY, HAS AN INTEREST IN PROVIDING ENTREPRENEURIAL OPPORTUNITIES TO DIVERSITY-OWNED BUSINESSES. THE UNIVERSITY IS DEDICATED TO PROMOTING THE GROWTH AND DEVELOPMENT OF MINORITY, WOMEN, AND SMALL AND HISTORICALLY UNDERUTILIZED BUSINESSES ("DIVERSE BUSINESSES") BY PROVIDING OPPORTUNITIES TO PARTICIPATE IN UNIVERSITY CONTRACTS.
- (B) IN SUPPORT OF THIS COMMITMENT, THE SUPPLIER SHALL USE GOOD FAITH AND BEST EFFORTS TO PROVIDE OPPORTUNITIES TO DIVERSE BUSINESSES THAT ARE EITHER CERTIFIED BY THE STATE OR ANOTHER CERTIFYING AGENCY IN A DIVERSE CATEGORY, AS A SUBCONTRACTOR OR SUPPLIER UNDER THIS AGREEMENT.
- (C) IF APPLICABLE, SUPPLIER SHALL PROVIDE LSU WITH A LIST OF DIVERSITY-OWNED BUSINESSES DURING EACH CONTRACT YEAR, THE LIST OF BUSINESSES SHOULD IDENTIFY:
  - (1) THE NAME OF THE BUSINESS;
  - (2) ITS PRINCIPAL OFFICE OR ADDRESS;
  - (3) THE OWNER(S); AND
  - (4) THE SERVICES OR GOODS THAT IT MAY PROVIDE OR SUPPLY AND THE VALUE OF THE GOODS OR SERVICES PROCURED FROM THE BUSINESSES INCLUDED ON SUPPLIER'S LIST.
- (D) TO THE EXTENT THAT ANY FEDERAL OR STATE LAW, RULE, OR REGULATION WOULD REQUIRE THAT THIS SECTION BE MODIFIED OR VOIDED, THE PARTIES AGREE THAT SUCH PROVISION CAN BE AMENDED OR SEVERED FROM THE AGREEMENT WITHOUT AFFECTING ANY OF THE OTHER TERMS OF THE AGREEMENT.

2. ALL BID PRICES MUST BE TYPED OR WRITTEN IN INK. ANY CORRECTIONS, ERASURES OR OTHER FORMS OF ALTERATION TO UNIT PRICES SHOULD BE INITIALIZED BY THE BIDDER.

3. THIS BID IS TO BE MANUALLY SIGNED IN INK BY A PERSON AUTHORIZED TO BIND THE VENDOR (See No.9).

VENDOR PHONE NUMBER:	TITLE	DATE
FAX NUMBER:		
SIGNATURE OF AUTHORIZED BIDDER (MUST BE SIGNED)	NAME OF BIDDER (TYPED OR PRINTED)	

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## STANDARD TERMS & CONDITIONS

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BIDDER:

4. BID PRICES SHALL INCLUDE DELIVERY OF ALL ITEMS F.O.B. DESTINATION OR AS OTHERWISE PROVIDED. BIDS CONTAINING "PAYMENT IN ADVANCE" OR "C.O.D." REQUIREMENTS MAY BE REJECTED. PAYMENT IS TO BE MADE WITHIN 30 DAYS AFTER RECEIPT OF A PROPERLY EXECUTED INVOICE THAT IS APPROVED BY LSUHSC OR DELIVERY, WHICHEVER IS LATER.

5. DESIRED DELIVERY: 10 DAYS AFTER RECEIPT OF ORDER, UNLESS SPECIFIED ELSEWHERE.

6. TO ASSURE CONSIDERATION OF YOUR BID, SEE HEADER FOR RETURN INSTRUCTIONS. ALL BIDS AND ADDENDA SHOULD BE RETURNED IN AN ENVELOPE OR PACKAGE AND CLEARLY ENDORSED WITH THE BID OPENING DATE, BID OPENING TIME, BID NUMBER, AND BID TITLE. ALL REQUEST FOR QUOTATIONS AND ADDENDA SHOULD BE SUBMITTED VIA FAX, EMAIL OR PLACED IN AN ENVELOPE AND DELIVERED.

7. BIDS SUBMITTED ARE SUBJECT TO PROVISIONS OF THE LAWS OF THE STATE OF LOUISIANA INCLUDING BUT NOT LIMITED TO L.R.S. 39:1551-1736; PURCHASING RULES AND REGULATIONS; EXECUTIVE ORDERS; STANDARD TERMS AND CONDITIONS; SPECIAL CONDITIONS; AND SPECIFICATIONS LISTED IN THIS SOLICITATION.

**PROHIBITION OF DISCRIMINATORY BOYCOTTS OF ISRAEL:**

IN ACCORDANCE WITH EXECUTIVE ORDER NUMBER JBE 2018-15, EFFECTIVE MAY 22, 2018, FOR ANY CONTRACT FOR \$100,000 OR MORE AND FOR ANY CONTRACTOR WITH FIVE OR MORE EMPLOYEES, CONTRACTOR, OR ANY SUBCONTRACTOR, SHALL CERTIFY IT IS NOT ENGAGING IN A BOYCOTT OF ISRAEL, AND SHALL, FOR THE DURATION OF THIS CONTRACT, REFRAIN FROM A BOYCOTT OF ISRAEL. THE STATE RESERVES THE RIGHT TO TERMINATE THIS CONTRACT IF THE CONTRACTOR, OR ANY SUBCONTRACTOR, ENGAGES IN A BOYCOTT OF ISRAEL DURING THE TERM OF THE CONTRACT.

8. IMPORTANT:

BY SIGNING THIS BID, THE BIDDER CERTIFIES COMPLIANCE WITH ALL INSTRUCTIONS TO BIDDERS, TERMS, CONDITIONS, AND SPECIFICATIONS AND FURTHER CERTIFIES THAT THIS BID IS MADE WITHOUT COLLUSION OR FRAUD. ALL BID INFORMATION SHALL BE MADE WITH INK OR TYPEWRITTEN.

9. SIGNATURE AUTHORITY:

SUBMIT EVIDENCE WITH THE BID OR UPON REQUEST

R.S. 39:1594 (C) (4) EVIDENCE OF AGENCY, CORPORATE, OR PARTNERSHIP AUTHORITY SHALL BE REQUIRED FOR SUBMISSION OF A BID TO PURCHASING AGENCIES OF THE STATE OF LOUISIANA.

THE AUTHORITY OF THE SIGNATURE OF THE PERSON SUBMITTING THE BID SHALL BE DEEMED SUFFICIENT AND ACCEPTABLE IF ANY OF THE FOLLOWING CONDITIONS ARE MET:

- (A) THE SIGNATURE ON THE BID IS THAT OF ANY CORPORATE OFFICER LISTED ON THE MOST CURRENT ANNUAL REPORT ON FILE WITH THE SECRETARY OF STATE, OR THE SIGNATURE ON THE BID IS THAT OF ANY MEMBER OF A PARTNERSHIP OR PARTNERSHIP IN COMMENDAM LISTED IN THE MOST CURRENT PARTNERSHIP RECORDS ON FILE WITH THE SECRETARY OF STATE.
- (B) THE SIGNATURE ON THE BID IS THAT OF AN AUTHORIZED REPRESENTATIVE OF THE CORPORATION, PARTNERSHIP, OR OTHER LEGAL ENTITY AND THE BIDDER SUBMITS OR PROVIDES UPON REQUEST A CORPORATE RESOLUTION, CERTIFICATION AS TO THE CORPORATE PRINCIPAL, OR OTHER DOCUMENTS INDICATING AUTHORITY WHICH ARE ACCEPTABLE TO THE PUBLIC ENTITY, INCLUDING REGISTRATION ON AN ELECTRONIC INTERNET DATABASE MAINTAINED BY THE PUBLIC ENTITY.
- (C) THE CORPORATION, PARTNERSHIP, OR OTHER LEGAL ENTITY HAS FILED IN THE APPROPRIATE RECORDS OF THE SECRETARY OF STATE IN WHICH THE PUBLIC ENTITY IS LOCATED, AN AFFIDAVIT, RESOLUTION, OR OTHER ACKNOWLEDGED OR

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BIDDER:

AUTHENTIC DOCUMENT INDICATING THE NAMES OF ALL PARTIES AUTHORIZED TO SUBMIT BIDS FOR PUBLIC CONTRACTS. SUCH DOCUMENT ON FILE WITH THE SECRETARY OF STATE SHALL REMAIN IN EFFECT AND SHALL BE BINDING UPON THE PRINCIPAL UNTIL SPECIFICALLY RESCINDED AND CANCELED FROM THE RECORDS OF THE RESPECTIVE OFFICES.

IT IS ACCEPTABLE FOR THE SIGNATURE ON THE BID TO BE LISTED AS A VENDOR CONTACT ON LAPAC (LOUISIANA PROCUREMENT AND CONTRACT NETWORK)

### 10. INQUIRIES:

ADDRESS ALL INQUIRIES AND CORRESPONDENCE TO THE BUYER AT THE PHONE NUMBER AND ADDRESS SHOWN ABOVE.

### 11. BID FORMS:

ALL WRITTEN BIDS, UNLESS OTHERWISE PROVIDED FOR, MUST BE SUBMITTED ON, AND IN ACCORDANCE WITH FORMS PROVIDED AND PROPERLY SIGNED. BIDS SUBMITTED IN THE FOLLOWING MANNER WILL NOT BE ACCEPTED:

- A. BID CONTAINS NO SIGNATURE INDICATING INTENT TO BE BOUND
- B. BID FILLED OUT IN PENCIL; AND
- C. BID NOT SUBMITTED PER THE SOLICITATION DOCUMENT.

BIDS MUST BE RECEIVED AT THE ADDRESS SPECIFIED IN THE SOLICITATION PRIOR TO BID OPENING TIME IN ORDER TO BE CONSIDERED.

### 12. STANDARDS OR QUALITY:

ANY PRODUCT OR SERVICE BID SHALL CONFORM TO ALL APPLICABLE FEDERAL AND STATE LAWS AND REGULATIONS AND THE SPECIFICATIONS CONTAINED IN THE SOLICITATION. UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION, ANY MANUFACTURER'S NAME, TRADE NAME, BRAND NAME, OR CATALOG NUMBER USED IN THE SPECIFICATION IS FOR THE PURPOSE OF DESCRIBING THE STANDARD OF QUALITY, PERFORMANCE, AND CHARACTERISTICS DESIRED AND IS NOT INTENDED TO LIMIT OR RESTRICT COMPETITION. BIDDER MUST SPECIFY THE BRAND AND MODEL NUMBER OF THE PRODUCT OFFERED IN HIS/HER BID. BIDS NOT SPECIFYING BRAND AND MODEL NUMBER SHALL BE CONSIDERED AS OFFERING THE EXACT PRODUCTS SPECIFIED IN THE SOLICITATION. LSUHSC RESERVES THE RIGHT TO INSPECT AND TEST THE DELIVERED ITEMS FOR COMPLIANCE WITH THE BID SPECIFICATIONS. IF THE ITEM FAILS TO MEET THE SPECIFICATIONS, THE COST OF TEST AND INSPECTION WILL BE PAID BY THE CONTRACTOR. IF THE ITEM IS IN COMPLIANCE, COST OF ALL TESTS WILL BE PAID BY LSUHSC.

### 13. DESCRIPTIVE INFORMATION:

BIDDERS PROPOSING AN EQUIVALENT BRAND OR MODEL SHOULD SUBMIT WITH THE BID, INFORMATION (SUCH AS ILLUSTRATIONS, DESCRIPTIVE LITERATURE, AND TECHNICAL DATA) SUFFICIENT FOR LSUHSC TO EVALUATE QUALITY, SUITABILITY, AND COMPLIANCE WITH THE SPECIFICATIONS IN THE SOLICITATION. FAILURE TO SUBMIT DESCRIPTIVE INFORMATION MAY CAUSE BID TO BE REJECTED. ANY CHANGE MADE TO A MANUFACTURER'S PUBLISHED SPECIFICATION SUBMITTED FOR A PRODUCT SHALL BE VERIFIABLE BY THE MANUFACTURER. IF ITEM(S) BID DO NOT FULLY COMPLY WITH SPECIFICATIONS (INCLUDING BRAND AND/OR PRODUCT NUMBER), BIDDER MUST STATE IN WHAT RESPECT ITEMS(S) DEVIATE. FAILURE TO NOTE EXCEPTIONS ON THE BID FORM WILL NOT RELIEVE THE SUCCESSFUL BIDDER(S) FROM SUPPLYING THE ACTUAL PRODUCTS REQUESTED.

### 14. BID OPENING:

BIDDERS MAY ATTEND THE BID OPENING, BUT NO INFORMATION OR OPINIONS CONCERNING THE ULTIMATE CONTRACT AWARD WILL BE GIVEN AT THE BID OPENING OR DURING THE EVALUATION PROCESS. BIDS MAY BE EXAMINED WITHIN 72 HOURS AFTER BID OPENING. INFORMATION PERTAINING TO COMPLETED FILES MAY BE SECURED BY VISITING LSUHSC DURING NORMAL

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BIDDER:

WORKING HOURS. WRITTEN BID TABULATIONS WILL NOT BE FURNISHED.

### 15. AWARDS:

AWARD WILL BE MADE TO THE LOWEST RESPONSIBLE AND RESPONSIVE BIDDER. LSUHSC RESERVES THE RIGHT TO AWARD ITEMS SEPARATELY, GROUPED, OR ON AN ALL OR NONE BASIS , AND TO REJECT ANY OR ALL BIDS AND WAIVE ANY INFORMALITIES.

### 16. PRICES:

UNLESS OTHERWISE SPECIFIED BY LSUHSC IN THE SOLICITATION, BID PRICES MUST BE COMPLETE, INCLUDING TRANSPORTATION PREPAID BY BIDDER TO DESTINATION AND FIRM FOR ACCEPTANCE FOR A MINIMUM OF 30 DAYS. IF ACCEPTED, PRICES MUST BE FIRM FOR THE CONTRACTUAL PERIOD. BIDS OTHER THAN F.O.B. DESTINATION MAY BE REJECTED. PRICES SHOULD BE QUOTED IN THE UNIT (EACH, BOX, CASE, ETC.) AS SPECIFIED IN THE SOLICITATION.

### 17. TAXES:

VENDOR IS RESPONSIBLE FOR INCLUDING ALL APPLICABLE TAXES IN THE BID PRICE. LSUHSC AGENCIES ARE EXEMPT FROM ALL STATE AND LOCAL SALES AND USE TAXES.

### 18. NEW PRODUCTS:

UNLESS SPECIFICALLY CALLED FOR IN THE SOLICITATION, ALL PRODUCTS FOR PURCHASE MUST BE NEW, NEVER PREVIOUSLY USED, AND THE CURRENT MODEL AND/OR PACKAGING. NO REMANUFACTURED, DEMONSTRATOR, USED OR IRREGULAR PRODUCT WILL BE CONSIDERED FOR PURCHASE UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION. THE MANUFACTURER'S STANDARD WARRANTY WILL APPLY UNLESS OTHERWISE SPECIFIED IN THE SOLICITATION.

### 19. CONTRACT RENEWALS:

UPON AGREEMENT OF LSUHSC AND THE CONTRACTOR , A TERM CONTRACT MAY BE EXTENDED FOR 4 (FOUR) ADDITIONAL 12 MONTH PERIODS AT THE SAME PRICES, TERMS AND CONDITIONS. IN SUCH CASES, THE TOTAL CONTRACT TERM CANNOT EXCEED 60 MONTHS. RS 39:1615

### 20. CONTRACT CANCELLATION:

#### TERMINATION FOR NONCOMPLIANCE:

LSUHSC HAS THE RIGHT TO CANCEL ANY CONTRACT, IN ACCORDANCE WITH PURCHASING RULES AND REGULATIONS, FOR CAUSE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- (1) FAILURE TO DELIVER WITHIN THE TIME SPECIFIED IN THE CONTRACT;
- (2) FAILURE OF THE PRODUCT OR SERVICE TO MEET SPECIFICATIONS, CONFORM TO SAMPLE QUALITY OR TO BE DELIVERED IN GOOD CONDITION;
- (3) MISREPRESENTATION BY THE CONTRACTOR;
- (4) FRAUD, COLLUSION , CONSPIRACY OR OTHER UNLAWFUL MEANS OF OBTAINING ANY CONTRACT WITH THE STATE;
- (5) CONFLICT OF CONTRACT PROVISIONS WITH CONSTITUTIONAL OR STATUTORY PROVISIONS OF STATE OR FEDERAL LAW;
- (6) ANY OTHER BREACH OF CONTRACT.

FURTHER, LSUHSC MAY TERMINATE THIS CONTRACT FOR CAUSE BASED UPON THE FAILURE OF THE CONTRACTOR TO COMPLY WITH THE TERMS AND/OR CONDITIONS OF THE CONTRACT; PROVIDED THAT LSUHSC SHALL GIVE THE CONTRACTOR WRITTEN NOTICE SPECIFYING THE FAILURE. IF WITHIN THIRTY (30) DAYS AFTER RECEIPT OF SUCH NOTICE, THE CONTRACTOR SHALL NOT HAVE EITHER CORRECTED SUCH FAILURE OR, IN THE CASE WHICH CANNOT BE CORRECTED IN THIRTY (30) DAYS, BEGUN IN GOOD FAITH TO CORRECT SAID FAILURE AND THEREAFTER PROCEEDED DILIGENTLY TO COMPLETE SUCH CORRECTION, THEN LSUHSC MAY, AT ITS OPTION, PLACE THE CONTRACTOR IN DEFAULT AND THE CONTRACT SHALL TERMINATE ON THE DATE

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SPECIFIED IN SUCH NOTICE. THE CONTRACTOR MAY EXERCISE ANY RIGHTS AVAILABLE TO IT UNDER LOUISIANA LAW TO TERMINATE FOR CAUSE UPON THE FAILURE OF LSUHSC TO COMPLY WITH THE TERMS AND CONDITIONS OF THIS CONTRACT; PROVIDED THAT THE CONTRACTOR SHALL GIVE LSUHSC WRITTEN NOTICE SPECIFYING LSUHSC'S FAILURE AND A REASONABLE OPPORTUNITY FOR LSUHSC TO CURE THE DEFECT

TERMINATION FOR CONVENIENCE:

LSUHSC MAY, AT ANY TIME, TERMINATE THE CONTRACT FOR THEIR CONVENIENCE AND WITHOUT CAUSE. UPON RECEIPT OF WRITTEN NOTICE FROM LSUHSC OF SUCH TERMINATION FOR THEIR CONVENIENCE, THE CONTRACTOR SHALL: CEASE OPERATIONS AS DIRECTED BY LSUHSC IN THE NOTICE; TAKE ACTIONS NECESSARY, OR THAT LSUHSC MAY DIRECT, FOR THE PROTECTION AND PRESERVATION OF THE WORK; AND EXCEPT FOR WORK DIRECTED TO BE PERFORMED PRIOR TO THE EFFECTIVE DATE OF TERMINATION STATED IN THE NOTICE, TERMINATE ALL EXISTING SUBCONTRACTS AND PURCHASE ORDERS AND ENTER INTO NO FURTHER SUBCONTRACTS AND PURCHASE ORDERS. IN CASE OF SUCH TERMINATION FOR LSUHSC'S CONVENIENCE, THE CONTRACTOR SHALL BE ENTITLED TO RECEIVE PAYMENT FOR WORK EXECUTED. LSUHSC SHALL NOT BE RESPONSIBLE OR OTHERWISE LIABLE FOR ANY DEMOBILIZATION COSTS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM SUCH TERMINATION.

TERMINATION FOR NON-APPROPRIATION OF FUNDS:

THE CONTINUATION OF THIS CONTRACT IS CONTINGENT UPON THE APPROPRIATION OF FUNDS TO FULFILL THE REQUIREMENTS OF THE CONTRACT.

21. DEFAULT OF CONTRACT:

FAILURE TO DELIVER WITHIN THE TIME SPECIFIED IN THE BID WILL CONSTITUTE A DEFAULT AND MAY CAUSE CANCELLATION OF THE CONTRACT. WHERE THE UNIVERSITY HAS DETERMINED THE CONTRACTOR TO BE IN DEFAULT, THE UNIVERSITY RESERVES THE RIGHT TO PURCHASE ANY OR ALL PRODUCTS OR SERVICES COVERED BY THE CONTRACT ON THE OPEN MARKET AND TO CHARGE THE CONTRACTOR WITH COST IN EXCESS OF THE CONTRACT PRICE. UNTIL SUCH ASSESSED CHARGES HAVE BEEN PAID, NO SUBSEQUENT BID FROM THE DEFAULTING CONTRACTOR WILL BE CONSIDERED.

22. ORDER OF PRIORITY:

IN THE EVENT THERE IS A CONFLICT BETWEEN THE INSTRUCTIONS TO BIDDERS OR STANDARD CONDITIONS AND THE SPECIAL CONDITIONS, THE SPECIAL CONDITIONS SHALL GOVERN.

23. APPLICABLE LAW:

ALL CONTRACTS SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF LOUISIANA.

24. COMPLIANCE WITH CIVIL RIGHTS LAWS:

BY SUBMITTING AND SIGNING THIS BID, BIDDER AGREES TO ABIDE BY THE REQUIREMENTS OF THE FOLLOWING AS APPLICABLE: TITLE VI AND VII OF THE CIVIL RIGHTS ACT OF 1964, AS AMENDED BY THE EQUAL OPPORTUNITY ACT OF 1972, FEDERAL EXECUTIVE ORDER 11246, FEDERAL REHABILITATION ACT OF 1973, AS AMENDED, THE VETERAN'S READJUSTMENT ASSISTANCE ACT OF 1974, TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, THE AGE ACT OF 1975, AND BIDDER AGREES TO ABIDE BY THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT OF 1990. BIDDER AGREES NOT TO DISCRIMINATE IN ITS EMPLOYMENT PRACTICES AND WILL RENDER SERVICES UNDER ANY CONTRACT ENTERED INTO AS A RESULT OF THIS SOLICITATION WITHOUT REGARD TO RACE, COLOR, RELIGION, SEX, AGE, NATIONAL ORIGIN, POLITICAL AFFILIATION, DISABILITY, VETERAN STATUS, OR ANY OTHER NON-MERIT FACTOR. ANY ACT OF DISCRIMINATION COMMITTED BY BIDDER, OR FAILURE TO COMPLY WITH THESE STATUTORY OBLIGATIONS WHEN APPLICABLE, SHALL BE GROUNDS FOR TERMINATION OF ANY CONTRACT ENTERED INTO AS A RESULT OF THIS SOLICITATION.

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BIDDER:

### 25. SPECIAL ACCOMMODATIONS:

ANY "QUALIFIED INDIVIDUAL WITH A DISABILITY" AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT WHO HAS SUBMITTED A BID AND DESIRES TO ATTEND THE BID OPENING, MUST NOTIFY THIS OFFICE IN WRITING NOT LATER THAN SEVEN DAYS PRIOR TO THE BID OPENING DATE OF THEIR NEED FOR SPECIAL ACCOMMODATIONS. IF THE REQUEST CANNOT BE REASONABLY PROVIDED, THE INDIVIDUAL WILL BE INFORMED PRIOR TO THE BID OPENING.

### 26. INDEMNITY:

CONTRACTOR AGREES, UPON RECEIPT OF WRITTEN NOTICE OF A CLAIM OR ACTION, TO DEFEND THE CLAIM OR ACTION, OR TAKE OTHER APPROPRIATE MEASURE, TO INDEMNIFY, AND HOLD HARMLESS, LSUHSC, ITS OFFICERS, ITS AGENTS AND ITS EMPLOYEES FROM AND AGAINST ALL CLAIMS AND ACTIONS FOR BODILY INJURY, DEATH OR PROPERTY DAMAGES CAUSED BY THE FAULT OF THE CONTRACTOR, OFFICERS, ITS AGENTS, OR ITS EMPLOYEES. CONTRACTOR IS OBLIGATED TO INDEMNIFY ONLY TO THE EXTENT OF THE FAULT OF THE CONTRACTOR, ITS OFFICERS, ITS AGENTS, OR ITS EMPLOYEES. HOWEVER, THE CONTRACTOR SHALL HAVE NO OBLIGATION AS SET FORTH ABOVE WITH RESPECT TO ANY CLAIM OR ACTION FROM BODILY INJURY, DEATH OR PROPERTY DAMAGES ARISING OUT OF THE FAULT OF THE UNIVERSITY, ITS OFFICERS, ITS AGENTS OR ITS EMPLOYEES.

### 27. IN ACCORDANCE WITH THE PROVISIONS OF (RS 39:2192):

IN AWARDING CONTRACTS, ANY PUBLIC ENTITY IS AUTHORIZED TO REJECT THE LOWEST BID FROM, OR NOT AWARD THE CONTRACT TO, A BUSINESS IN WHICH ANY INDIVIDUAL WITH AN OWNERSHIP INTEREST OF FIVE PERCENT OR MORE HAS BEEN CONVICTED OF, OR HAS ENTERED A PLEA OF GUILTY OR NOLO CONTENDERE TO ANY STATE FELONY CRIME OR EQUIVALENT FEDERAL FELONY CRIME COMMITTED IN THE SOLICITATION OR EXECUTION OF A CONTRACT OR BID AWARDED UNDER THE LAWS GOVERNING PUBLIC CONTRACTS UNDER THE PROVISIONS OF CHAPTER 10 OF TITLE 38 OF THE LOUISIANA REVISED STATUTES OF 1950, PROFESSIONAL, PERSONAL, CONSULTING, AND SOCIAL SERVICES PROCUREMENT UNDER THE PROVISIONS OF CHAPTER 16 OF TITLE 39, OR THE LOUISIANA PROCUREMENT CODE UNDER THE PROVISIONS OF CHAPTER 17 OF TITLE 39.

### 28. CERTIFICATION OF NO SUSPENSION OR DEBARMENT:

BY SIGNING AND SUBMITTING THIS BID, THE BIDDER CERTIFIES THAT THEIR BUSINESS ENTITY, ANY SUBCONTRACTORS OR PRINCIPALS ARE NOT SUSPENDED OR DEBARRED BY EITHER THE DEPARTMENT OF HEALTH AND HUMAN SERVICES, OFFICE OF INSPECTOR GENERAL (OIG) OR THE GENERAL SERVICES ADMINISTRATION (GSA) IN ACCORDANCE WITH THE REQUIREMENTS IN "AUDIT REQUIREMENTS IN SUBPART F OF THE OFFICE OF MANAGEMENT AND BUDGET'S UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS."

A LIST OF PARTIES WHO HAVE BEEN SUSPENDED OR DEBARRED CAN BE VIEWED VIA THE INTERNET AT [HTTPS://SAM.GOV](https://SAM.GOV)

IF AT ANY TIME DURING THE TERM OF THE CONTRACT AWARDED AS A RESULT OF THIS INVITATION TO BID, THIS ENTITY OR ANY OF ITS EMPLOYEES OR SUBCONTRACTORS APPEARS ON EITHER LISTING, THIS ENTITY WILL NOTIFY THE CONTRACTING AGENCY, AND THE CONTRACT WILL BE TERMINATED. THE CONTRACTING AGENCY WILL NOT BE LIABLE FOR ANY DAMAGES RESULTING FROM SAID TERMINATION.

### 29. FEDERAL CLAUSES (IF APPLICABLE):

ANTI-KICKBACK CLAUSE. THE CONTRACTOR HEREBY AGREES TO ADHERE TO THE MANDATE DICTATED BY THE COPELAND "ANTI-KICKBACK" ACT WHICH PROVIDES THAT EACH CONTRACTOR OR SUB GUARANTEE SHALL BE PROHIBITED FROM INDUCING BY ANY MEANS, ANY PERSON EMPLOYED IN THE COMPLETION OF WORK, TO GIVE UP ANY PART OF THE COMPENSATION TO WHICH HE IS OTHERWISE ENTITLED.

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**CLEAN AIR ACT:**

THE CONTRACTOR HEREBY AGREES TO ADHERE TO THE PROVISIONS WHICH REQUIRE COMPLIANCE WITH ALL APPLICABLE STANDARDS, ORDERS OR REQUIREMENTS ISSUED UNDER SECTION 306 OF THE CLEAN WATER ACT, WHICH PROHIBITS THE USE UNDER NON-EXEMPT FEDERAL CONTRACTS, GRANTS, OR LOANS OF FACILITIES INCLUDED ON THE EPA LIST OF VIOLATING FACILITIES.

**ENERGY POLICY AND CONSERVATION ACT:**

THE CONTRACTOR HEREBY RECOGNIZES THE MANDATORY STANDARDS AND POLICIES RELATING TO ENERGY EFFICIENCY WHICH ARE CONTAINED IN THE STATE ENERGY CONSERVATION PLAN ISSUED IN COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT (P.L. 94-163)

**CLEAN WATER ACT:**

THE CONTRACTOR HERBY AGREES TO ADHERE TO THE PROVISIONS WHICH REQUIRE COMPLIANCE WITH ALL APPLICABLE STANDARDS, ORDERS, OR REQUIREMENTS ISSUED UNDER SECTION 508 OF THE CLEAN WATER ACT WHICH PROHIBITS THE USE UNDER NON-EXEMPT FEDERAL CONTRACTS, GRANTS, OR LOANS OF FACILITIES INCLUDED ON THE EPA LIST OF VIOLATING FACILITIES.

**ANTI-LOBBYING AND DEBARMENT ACT:**

THE CONTRACTOR WILL BE EXPECTED TO COMPLY WITH FEDERAL STATUES REQUIRED IN THE ANTI-LOBBYING ACT AND THE DEBARMENT ACT.

**30. ADHERENCE TO JCAHO STANDARDS:**

WHERE APPLICABLE, LSUHSC IS ACCREDITED BY THE JOINT COMMISSION ON ACCREDITATION OF HEALTHCARE ORGANIZATIONS AND AS SUCH ALL CONTRACTORS, SUBCONTRACTORS, AND VENDORS AGREE TO ADHERE TO THE APPLICABLE STANDARDS PROMULGATED BY THE COMMISSION

**31. IN ACCORDANCE WITH LOUISIANA LAW, ALL CORPORATIONS (RS 12:163) AND LIMITED LIABILITY COMPANIES (RS 12:1308.2) MUST BE IN GOOD STANDING WITH THE LOUISIANA SECRETARY OF STATE IN ORDER TO HOLD A CONTRACT WITH THE STATE.**

**32. INTERPRETATION OF DOCUMENT:**

ANY INTERPRETATION OF THE BID OR QUOTATION DOCUMENT WILL ONLY BE MADE BY AN ADDENDUM ISSUED IN WRITING BY THE PURCHASING DEPARTMENT. SUCH ADDENDUM WILL BE MAILED OR DELIVERED TO EACH PERSON RECEIVING A SET OF THE ORIGINAL BID OR QUOTATION DOCUMENTS. LSUHSC WILL NOT BE RESPONSIBLE FOR ANY OTHER EXPLANATION OR INTERPRETATION OF THE DOCUMENTS.

**33. THIS SOLICITATION CONTAINS ALL TERMS AND CONDITIONS WITH RESPECT TO THE PURCHASE OF THE GOODS AND OR SERVICES SPECIFIED HEREIN. SUBMITTAL OF ANY CONTRARY TERMS AND CONDITIONS MAY CAUSE YOUR BID TO BE REJECTED. BY SIGNING AND SUBMITTING A BID, VENDOR AGREES THAT CONTRARY TERMS AND CONDITIONS WHICH MAY BE INCLUDED IN ITS BID ARE NULLIFIED AND AGREES THAT THIS CONTRACT SHALL BE CONSTRUED IN ACCORDANCE WITH THIS SOLICITATION.**

**34. VENDORS FORMS:**

THE PURCHASE/RELEASE ORDER IS THE ONLY BINDING DOCUMENT TO BE ALLOWED AGAINST THIS CONTRACT. SIGNING OF VENDOR'S FORMS IS NOT ALLOWED.



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BIDDER:

35. PUBLICIZING AWARDS:

IN ACCORDANCE WITH L.A.C 34:I.535, UNSUCCESSFUL BIDDERS WILL BE NOTIFIED OF THE AWARD PROVIDED THEY SUBMIT WITH THEIR BID A SELF-ADDRESSED STAMPED ENVELOPE REQUESTING THIS INFORMATION.

36. PREFERENCE:

IN ACCORDANCE WITH LOUISIANA REVISED STATUTES 39:1595, A PREFERENCE MAY BE ALLOWED FOR PRODUCTS MANUFACTURED, PRODUCED, GROWN, OR ASSEMBLED IN LOUISIANA OF EQUAL QUALITY. DO YOU CLAIM THIS PREFERENCE?

YES \_\_\_\_\_

SPECIFY THE LINE NUMBER (S) \_\_\_\_\_

SPECIFY LOCATION WITHIN LOUISIANA WHERE THIS PRODUCT IS MANUFACTURED, PRODUCED, GROWN OR ASSEMBLED \_\_\_\_\_

(NOTE: IF MORE SPACE IS REQUIRED, INCLUDE ON SEPARATE SHEET.)

DO YOU HAVE A LOUISIANA BUSINESS WORK FORCE? YES \_\_\_\_\_ NO \_\_\_\_\_

IF SO, DO YOU CERTIFY THAT AT LEAST FIFTY PERCENT (50%) OF YOUR LOUISIANA WORKFORCE IS COMPRISED OF LOUISIANA RESIDENTS?

YES \_\_\_\_\_ NO \_\_\_\_\_

FAILURE TO SPECIFY ABOVE INFORMATION MAY CAUSE ELIMINATION FROM PREFERENCES.

PREFERENCES SHALL NOT APPLY TO SERVICE CONTRACTS.

37. AUDIT OF RECORDS: THE STATE LEGISLATIVE AUDITOR, FEDERAL AUDITORS, AND INTERNAL AUDITORS OF THE STATE SHALL HAVE THE RIGHT TO INSPECT AND AUDIT ALL TIMEKEEPING AND EXPENSE RECORDS OF THE CONTRACTING ENTITY OR ANY SUBCONTRACTOR OF THE CONTRACTING ENTITY TO SUBSTANTIATE AMOUNTS INVOICED BY SUPPLIER WITH RESPECT TO THIS AGREEMENT. THE RIGHTS OF INSPECTION AND AUDIT SHALL COMMENCE AS OF THE DATE OF THIS AGREEMENT AND SHALL CONTINUE FOR A PERIOD OF FIVE (5) YEARS AFTER PROJECT ACCEPTANCE OR AS REQUIRED BY APPLICABLE STATE AND FEDERAL LAW. THE CONTRACTING ENTITY AND ANY SUBCONTRACTOR OF THE CONTRACTING ENTITY SHALL MAINTAIN ALL TIMEKEEPING AND EXPENSE RECORDS RELATED TO THIS AGREEMENT FOR THE ENUMERATED FIVE (5) YEAR PERIOD.

38. CONFIDENTIALITY: CONTRACTOR SHALL PROTECT FROM UNAUTHORIZED USE AND DISCLOSURE ALL INFORMATION RELATING TO THE STATE'S OPERATIONS AND DATA (E.G. FINANCIAL, STATISTICAL, PERSONAL, TECHNICAL, ETC.) THAT BECOMES AVAILABLE TO THE CONTRACTOR IN CARRYING OUT THIS CONTRACT. CONTRACTOR SHALL USE PROTECTING MEASURES THAT ARE THE SAME OR MORE EFFECTIVE THAN THOSE USED BY THE STATE. CONTRACTOR IS NOT REQUIRED TO PROTECT INFORMATION OR DATA THAT IS PUBLICLY AVAILABLE OUTSIDE THE SCOPE OF THIS CONTRACT; ALREADY RIGHTFULLY IN THE CONTRACTOR'S POSSESSION; INDEPENDENTLY DEVELOPED BY THE CONTRACTOR OUTSIDE THE SCOPE OF THIS CONTRACT; OR RIGHTFULLY OBTAINED FROM THIRD PARTIES.

39. CYBERSECURITY TRAINING: IN ACCORDANCE WITH LA. R.S. 42:1267(B)(3) AND THE STATE OF LOUISIANA'S INFORMATION SECURITY POLICY, IF THE CONTRACTOR, ANY OF ITS EMPLOYEES, AGENTS, OR SUBCONTRACTORS WILL HAVE ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS, THE CONTRACTOR'S EMPLOYEES, AGENTS, OR SUBCONTRACTORS WITH SUCH ACCESS MUST COMPLETE CYBERSECURITY TRAINING ANNUALLY, AND THE CONTRACTOR MUST PRESENT EVIDENCE OF SUCH COMPLIANCE ANNUALLY AND UPON REQUEST. THE CONTRACTOR MAY USE THE CYBERSECURITY TRAINING COURSE OFFERED BY THE LOUISIANA DEPARTMENT OF STATE CIVIL SERVICE WITHOUT ADDITIONAL COST OR MAY USE ANY ALTERNATE COURSE APPROVED IN WRITING BY THE OFFICE OF TECHNOLOGY SERVICES.

# Invitation to Bid

## STANDARD TERMS & CONDITIONS

Page 9 of 10

**NUMBER** : 000494  
**OPEN DATE** : 06/19/2023      **TIME:** 02:00 PM

**BIDDER:**

FOR PURPOSES OF THIS SECTION, "ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS" MEANS THE POSSESSION OF CREDENTIALS, EQUIPMENT, OR AUTHORIZATION TO ACCESS THE INTERNAL WORKINGS OF STATE INFORMATION TECHNOLOGY SYSTEMS OR NETWORKS. EXAMPLES WOULD INCLUDE BUT NOT BE LIMITED TO STATE-ISSUED LAPTOPS, VPN CREDENTIALS TO ACCESS THE STATE NETWORK, BADGING TO ACCESS THE STATE'S TELECOMMUNICATIONS CLOSETS OR SYSTEMS, OR PERMISSIONS TO MAINTAIN OR MODIFY IT SYSTEMS USED BY THE STATE. FINAL DETERMINATION OF SCOPE INCLUSIONS OR EXCLUSIONS RELATIVE TO ACCESS TO STATE GOVERNMENT INFORMATION TECHNOLOGY ASSETS WILL BE MADE BY THE OFFICE OF TECHNOLOGY SERVICES.

# Invitation to Bid

## PRICE SHEET

Page 10 of 10

NUMBER : 000494

BIDDER:

OPEN DATE : 06/19/2023 TIME: 02:00 PM

UNLESS SPECIFIED ELSEWHERE SHIP TO:

Line No.	Description	Qty	UOM	Unit Price	Extended Amount
1	<p>BLANKET CONTRACT FOR TELECOMMUNICATIONS AND NETWORK WIRING SERVICE AND SUPPORT FOR THE PERIOD OF ONE YEAR FROM THE DATE OF AWARD.</p> <p>Specify brand, model bid(if applicable)</p> <hr/> <p>REFER TO ATTACHMENT FOR BID SPECIFICATIONS, TERMS AND CONDITIONS ATTACHMENT INCLUDES: INVITATION TO BID - BID SPECIFICATIONS</p> <p>SCHEDULE A FOR PRICING-FINAL</p> <p>EXHIBIT A - 2023 NETWORK WIRING SUPPORT BID JOB SAMPLES NUMBER 1 THRU 6 INCLUDES MAPS FOR EACH JOB AND PRICING SHEET FOR EACH JOB</p> <p>EXHIBIT B - PHOTOGRAPHS OF EXISTING LSUHSC NETWORK INSTALLATIONS TO ILLUSTRATE A MINIMALLY ACCEPTABLE LEVEL OF WORKMANSHIP WHICH WILL BE REQUIRED OF THE SUCCESSFUL BIDDER.</p> <p>LSUHSC ENTERPRISE NETWORKING - CABLING INFRASTRUCTURE:DESIGN &amp; INSTALLATION STANDARDS.</p> <p>INSURANCE REQUIREMENTS FOR CONTRACTORS</p>	1.00	LOT		

**LSU Health Sciences Center  
Auxiliary Enterprises  
Network Wiring**

INVITATION TO BID

Telecommunications and Network Wiring Service and Support

BID SPECIFICATIONS  
PER ATTACHMENTS

LSU HEALTH SCIENCES CENTER BID NUMBER #000418

Direct any questions to Alethea Craig, LSUHSC NO, Procurement Analyst, 568 4691.

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## SUMMARY

This bid is for cabling infrastructure installation and support services for the LSUHSC-NO Academic Campuses, Clinics, and associated state agencies in the greater New Orleans area. Prospective vendors will provide pricing for labor for each line item on Schedule A. Six (6) sample project descriptions representative of the size and scope of work expected will be provided for vendor review (Exhibit A). Sample projects are for reference only and are not associated with any actual work to be performed. The contract awarded will be for an initial duration of twelve (12) months. Up to four (4) renewals for additional twelve (12) month periods will be considered (maximum of sixty (60) consecutive months). At each renewal opportunity, both LSUHSC-NO and the current vendor must agree that all terms and conditions will remain the same.

If there is any change to the terms and conditions from the original purchase order, then LSUHSC-NO must re-bid the Telecommunications and Network Wiring Service and Support contract. A new solicitation will be created and all prospective vendors will be given the opportunity to compete for LSUHSC-NO telecommunications and network wiring installation and service business. The University reserves the right to award all or none. The successful bidder must have staff certified in the use of Spec Seal0. Firestop products and Belden jacks and cable or like manufacturer product partnerships to provide the required services as outlined in this bid.

Only organizations which have been in the telecommunications and network wiring business at least five (5) years will be considered. The University reserves the right to reject any and all bids at its discretion. After the contract has been awarded, no changes will be made to any part of the contract without written approval from Rob Parker, Director of Supply Chain & Auxiliary Operations, or his designee. Mr. Parker can be reached at (504)568-4814.

The successful bidder will be required to coordinate through the Auxiliary Enterprises (AE) Network Installation Coordinator for network installation related requests from the LSUHSC-NO Enterprise Network Group, computer supporters, facility managers and users to provide the following services:

- Preparing estimates.
- Preparing cable routes.
- Making penetrations and testing of floors or walls that will be penetrated to ensure no utility or structural components of the building will be damaged or otherwise compromised.
- Sealing penetrations per State and Local codes and LSUHSC-NO and facility requirements.
- Installing cable trays, hooks, conduit, inner-duct or other acceptable means of routing or protecting cable.
- Testing components and equipment installations.
- Installing copper cable, including horizontal, vertical and backbone.
- Terminating cables, both copper and fiber-optic.
- Installing wall plates.
- Installing A/V equipment, Including but not limited to projector screens, speakers, televisions and A/V cables.
- Installing surveillance cameras.
- Installing cabinets, racks, patch panels, cable management, ladders, and any other related equipment in telecommunications closets.
- Testing all cables.
- Labeling all cables, patch panels and other termination points per attached requirements.

- Mapping jacks and ports.
- Trouble-shooting cable infrastructure problems.
- Fusion splicing fiber-optic cable.
- Removing data cable.
- Moving existing drops, excluding labels, terminations, etc.
- Grounding Racks (existing building ground).
- Installing Antenna Masts.

Minimum standards have been established for network installation workmanship and configuration to ensure quality. Refer to the attached document "*LSUHSC Enterprise Networking Cabling Infrastructure, Design and Installation Standards*" (Exhibit C).

## GENERAL

The use of the word "vendor" shall be interpreted to be the firm or corporation who has been awarded a contract by the department. The contract will be administered by a representative of LSUHSC-NO's Department of Auxiliary Enterprises, hereafter denoted by the term "department."

Installation or maintenance of the network infrastructure often involves several groups with specific roles in the process. Those include the Department of Information Technology (IT), Facilities Management, Departmental Computer Support, and Auxiliary Enterprises. Each will often have a direct role in the planning, implementation and review of network installations.

LSUHSC-NO IT provides oversight for the design, maintenance, and support of the academic campus. IT establishes networking standards, designs, budgets and oversight for the network infrastructure. They also house, maintain and support servers and other centralized equipment and services.

Facilities Management, at individual sites, has specific requirements for vendors or in-house service agencies as it relates to services provided on site. This takes the form of sign-in, distribution of identification badges, permits to work in the facility that describe the work being performed, location, and duration. Other documentation is often required depending on the type of work being performed. "Fire Wall Penetration Permits" must be completed before starting any work that will require any penetrations in the facility regardless of size, type, or number.

Division, School or Computer Support Staff provide end-user and departmental level support for all computer related needs in each facility. They are typically the source of the need and funding for services. As a need is identified, Computer Support works directly with AE Network Wiring to request the services if the job is small (ports are available). If the job is sufficiently large that it requires planning, they or their administration requests the service directly from IT. IT then researches, plans, budgets, and requests the services and materials. IT approves all network design plans. If the requestor of the service is agreeable with the plan, all parties must agree on a time line. Computer Support also provides oversight during implementation and must approve the completed project.

Auxiliary Enterprises, Network Wiring will coordinate activities of the vendor, acting as a point of contact between the vendor and LSUHSC-NO. As requests for services are received, the Network Wiring Installation Coordinator will record the request and arrange for site surveys with the IT, Facilities, Computer Support, and/or departmental staff as necessary to establish requirements and specifications. The Network Wiring Installation Coordinator will then coordinate the

scheduling of the work with all involved parties. Once the project is complete, the Network Wiring Installation Coordinator, Computer Support and if necessary IT will inspect the project.

## **VENDOR REQUIREMENTS**

- Vendor shall have a permanent office within a 25 mile radius of the LSUHSC-NO downtown campus and be able to respond to service calls and have personnel onsite within one hour.
- The vendor must have been in continuous operation for a period of 5 years or more as a telephone and network wiring installer in the United States. Federal or State tax forms, occupational licenses or similar forms of proof shall be adequate for this provision and must be presented with the bid submittal.
- The vendor shall be a licensed commercial vendor in the state of Louisiana with the classification of Specialty: Telecommunications. A general electrical license will not be considered acceptable. All bidders must be qualified under the Contractor's Licensing Law, Title 37 Louisiana Revised Statutes, where the cost of work is Fifty Thousand Dollars (\$50,000) or more. Proper licensure will be verified by the University. All proposals submitted by bidders without the required and verifiable licenses will be rejected.
  - The vendor and its technicians must have at least 5 years or more of structured cabling on the job experience and vendor must be a factory partner or like certification on the following products which would allow them to provide an end to end warranty on these products. (partnership or certification for comparable products from other manufacturers is acceptable):
    - SpecSeal Firestop products
      - Such as EZ Path Fire Rated Pathway, Intumescent Firestop Sealant, Collars, Wrap Strips, Firestop Pillows, etc. .
    - Belden CAT6 jacks and cable

Letters of the vendor's authorization, partnership, and/or certification on manufacturers' letterhead should be provided with the bid submission. If the winning bidder is not Belden certified, they should become authorized/certified within 90 days of the award.

- The vendor must have installed telecommunications and data low voltage wiring projects of similar size and complexity in the last 5 years. A list of at least 3 client names, contact telephone numbers and contact persons shall be satisfactory proof for this qualification. Proposer, by virtue of this submittal, shall give LSUHSC-NO and its' agents permission to contact these clients for the purpose of determining satisfaction with the installation and service provided by the Proposer.
- The vendor must own and have available a properly calibrated OTDR (Optical Time Domain Reflectometer) and OLTS (Optical Loss Test Set) for testing fiber. Calibration certificate should be provided with bid submission.
- The vendor must own and have available a cable tester capable of certifying Category 5 and Category 6 cabling. Calibration certificate should be provided with bid submission.
- All required bidder/vendor licenses, certificates, and qualifications must be maintained for the duration of the contract period and any contract extensions. Additionally, the successful bidder/vendor must maintain trained personnel sufficient to meet all bid requirements at all times. Failure to maintain these standards will be grounds for default and the University may, at its option, award the remaining contract to another bidder or solicit new bids.

- Bidder must be able to provide the services described in this bid at all the LSUHSC-NO Campuses, Clinics, associated state agencies in the greater New Orleans area. The major sites include:
  - LSUHSC-NO main academic campus, New Orleans
    - Includes Downtown and City Park Campuses.
- The University reserves the right to examine the vendor's past payroll records and any subcontractor's records to determine whether the employees being used on the contract are regularly employed. The University also reserves the right to question the use of an employee whom it feels is not certified or trained on a task that requires a training or certification.
- After the job has been awarded, no changes will be made to any part of the contract without written approval from the Assistant Director of Auxiliary Enterprises and the Chief Procurement Officer or his designee. Each proposed change will be submitted in writing, with a breakdown of hours and the cost.
- The vendor shall carry public liability insurance and workmen's compensation and a certificate of insurance shall be furnished at least five (5) days prior to the effective date of the contract. The limits of such insurance shall be (1) one million dollars and shall be from a company licensed to do business in the State of Louisiana (Insurance, and Liability).
- No notice of completion, delivery memo, invoice, or other document will be signed, or approvals of any type be given for any part of the job, except by the Assistant Director of Auxiliary Enterprises or his designee.
- All work will be done during normal working hours unless prior written approval is granted by the Assistant Director of Auxiliary Enterprises. All work must be completed with minimal disruption to normal business operations.

## **BID REQUIREMENTS**

- 1) Bidders should address all topics listed in the bid in a concise, comprehensive, and orderly manner. Bidders should respond to topics in the bid in the same order as they are listed.
- 2) Bidder must complete, sign, and return with the bid the "INVITATION TO BID" sheet at the beginning of this bid.
- 3) If any bidder locates any errors in the bid or questions any portion of the bid, they should notify Procurement Analyst Alethea Craig at (504)568-4691 as soon as possible. Bidders should have a complete understanding of the bid before submitting their bid for consideration. Notification of errors or misprints will not negatively affect the award of the bid.
- 4) Bid must be in the purchasing department's offices before the closing date and time listed on the "INVITATION TO BID" sheet at the beginning of this document.
- 5) Bidder should attach all required supporting documentation to the bid; references, pricing, certifications, licenses, insurance certificates, etc.
- 6) The submittal shall include the names, years of experience, and certifications of all technicians currently employed that will provide installation or service to LSUHSC-NO. The list of technicians employed by the Proposer must include their office address, and telephone number.



- 7) The contract will begin on the contract date and end twelve (12) months later.
- 8) The contract may be extended for up to four (4) additional twelve (12) month periods, at the same price, terms and conditions, if agreeable with the successful vendor and LSUHSC-NO. Total length of contract not to exceed sixty (60) months. Renewal is optional for both parties.
- 9) This bid is for the exclusive use of LSUHSC-NO Auxiliary Enterprises for support of the LSUHSC-NO Campuses in the greater New Orleans area
- 10) Information and data furnished by the vendor must be accurate and complete.
- 11) The bidder must provide two contacts: an account or sales representative and an alternate, to handle all Network Wiring inquiries. The bidder must provide one contact (service representative) to handle all general Network Wiring service inquiries. Vendor contacts should respond to inquiries within four (4) hours of request.
  - a) These representatives will be empowered to respond or seek answers to questions regarding issues with product, service, or account information. The vendor representative will do the necessary research in a timely manner and return that information to AE Network Wiring.
  - b) When the bid is awarded and jobs are issued, the vendor must furnish a field contact for each project to answer questions concerning jobs in progress. This individual must be able to respond to an email or phone call within two hours.
  - c) The Account Manager must work with and through AE Network Wiring and may only work directly with users through arrangements and joint efforts arranged by AE Network Wiring. Should individual users or support personnel within LSUHSC-NO contact the vendor directly concerning the purchase of services covered by this contract, the vendor should obtain their name and phone number and direct those individuals to the AE Network Wiring Coordinator.
  - d) These representatives will be knowledgeable of the contract and the relationship between the vendor and AE Network Wiring.
- 12) Bidders are specifically encouraged NOT to include their own language or terms and conditions as doing so will likely invalidate their bid. This should not be read as to discourage response where vendors are to make additional offers of services or products beyond the requirements of this bid. The vendor shall perform all services as an independent vendor and shall discharge all its liabilities as such. Any actions or representations, whether oral or written by the vendor with respect to third parties, shall not be binding on LSUHSC-NO.
- 13) The vendor shall not in any way or form publicize or advertise that the vendor is providing services to LSUHSC-NO without the express written approval of the Director of Auxiliary Enterprises, obtained in advance, for each item.
- 14) In order to qualify for consideration, bidders shall list not less than three (3) references where the bidder has performed the same or similar services with comparable volumes at institutions comparable in size and business environments within the last five (5) years. Included with all the above references should be the name of the institution/entity, address, years of service, contact person, and phone number.
- 15) Brochures, catalogs, or any other materials referenced by the bidder to support a response should be appended to the bid.

16) Any additional equipment, services, or resources that the bidder is willing to provide at no additional charge should be listed. If the additional equipment or services are conditional, the bidder should indicate the condition(s). When the bid is awarded, the vendor will be expected to provide the additional equipment/services unless AE retracts the requirement.

17) Bids must be complete for consideration.

18) **The University reserves the right to reject any and all bids at its discretion.**

## **BID AWARD**

Award of the bid will be based on the following:

- a) Pricing provided by each bidder for services based on estimated 12 month quantities. The details will be used after the contract is awarded to audit proposals generated by the vendor during the contract period.
- b) Compliance with all bid requirements.
- c) Submittal of required documentation with the bid.
- d) Complete responses to the bid.
- e) Experience performing similar services for multiple organizations of similar size and complexity and using similar technology. Bidders should be prepared and may be required to host one or more site visits for representatives of LSUHSC-NO to inspect representative bidder installations of similar size and complexity. Local sites are preferred.

Quantities listed on Schedule A are estimates and not guaranteed. Bid will be evaluated based upon totals of estimated quantities in Schedule A at the standard price.

- a) Each bidder must provide the rate for labor for each line item on Schedule A, reflecting the appropriate units. Labor rates will reflect costs for project management and design.
- b) The extended total for each line item will be calculated by multiplying the standard price by the estimated quantity. The extended totals will be summed to arrive at an extended bid total. This value will determine which bidder has provided the lowest cost for the estimated services to be provided. The vendor with the lowest cost that meets all other bid requirements and certifications will be awarded the contract. The extended totals and extended bid total will be calculated by LSUHSC-NO and based upon the labor rate provided for each line item by the bidder.

The University will make an all or none award of this contract.

## **TERMINATION OF CONTRACT**

LSUHSC-NO AE may terminate the contract(s) with 30 days written notice, without any penalty, at any time for one or more of the following reasons:

- a. **Force Majeure:** If reasons beyond the control of LSUHSC-NO (e.g. fire, natural disaster, loss of revenue – see 2.b. below), cause business operation in any or all of the facilities of LSUHSC-NO to become interrupted or discontinued, then AE shall have the right to scale-back, terminate, or suspend the contract immediately by certified written notice.
- b. **Lack of funding**

- c. **Performance:** The contract(s) can be cancelled if the winning vendor fails to meet any requirements of the contract specifications. It is the responsibility of the vendor to be sure all vendor personnel associated with the contract are knowledgeable of the contract requirements. Should the vendor fail to deliver the equipment and services as specified, the vendor will be provided a thirty (30) day written notice of cancellation or at the discretion of AE, the vendor may be given an opportunity to resolve the problem(s) to prevent termination.
- d. **Exclusivity and Pricing:** LSUHSC-NO Auxiliary Enterprises expects to obtain cost savings through volume buying. The contract awarded as a result of this bid will be for the exclusive use of LSUHSC-NO Auxiliary Enterprises and pricing offered in these contracts will not be extended to other entities within the LSU Health Sciences Center. If during the course of this contract, the winning vendor does offer the same or lower pricing to other LSUHSC-NO entities, it must adjust its pricing to Auxiliary Enterprises to be lower than the pricing being offered to the other entity.

In the event either party breaches any terms or conditions of the contract agreement, the aggrieved party shall give the other party written notification within ten (10) calendar days of the alleged breach. The aggrieved party shall set forth the alleged breach and demand compliance with the contract. If within ten (10) days of notification of the alleged breach the offending party has not contested, ceased, or arrangements have not been made to correct the alleged breach, then the aggrieved party may terminate the contract without any prejudice to any right or remedy the aggrieved party may have by giving ten (10) calendar days written notification of termination to the offending party. Repeated notification of similar breaches may result in termination. Correction of any breaches should be a permanent resolution. Any contract cancellation for cause shall be served by registered or certified mail.

## **TERMINATION FOR CONVENIENCE**

LSU Health Sciences Center may terminate the Contract at any time by giving thirty (30) days written notice to the vendor. The vendor shall be entitled to payment for deliverables in progress, to the extent work has been performed satisfactorily.

## **WORK EXPECTATIONS**

- A) Technicians and other installation crewmembers must be dressed appropriately. No short pants are allowed and shirts must be tucked into pants. There will be no logos or wording other than the vendor's logos or vendor related verbiage on clothing. Caps will be plain or contain the vendor's logo.
- B) Vendor must contact LSUHSC-NO when arriving or departing the campus. Vendor employees will stay busy at all times when on campus.
- C) Vendor employees will interact with LSUHSC-NO staff, faculty, students, or visitors only in an official and professional manner when on campus.
- D) No profanity or loud boisterous conversations will be tolerated in or around the property. No music of any type will be tolerated in or around the property.
- E) The designated contact person for crews on site will closely supervise their crew, knowing where they are at all times and ensuring that they are productive when on site.
- F) Vendor shall not put waste in vacant or storage areas. All waste is to be removed daily from the building and deposited in a location designated by the Institution or hauled off site. Selected provider is responsible for maintaining cleanliness of work areas. Any excess or "scrap" materials purchased or supplied by LSUHSC-NO is considered state property. These items should be returned to Network Wiring upon job completion.

- G) Smoking is not allowed anywhere on campus.
- H) Vendor's representatives are to confine themselves to their respective work areas. Workers found roaming or loitering in non-work areas will be banned from the property.
- I) The Institution will not supply parking areas. Selected provider shall arrange for parking as required with outside agents.
- J) All workers will wear LSUHSC-NO identification tags at all times. The names and titles of all workers that will be on the Institution's premises and their supervisor's name shall be submitted prior to the commencement of work.
- K) Due to the nature of healthcare and associated educational operations, it will sometimes be necessary to request that projects be completed on the weekend and/or after normal working hours. Bidder must be able to provide this service as they would during normal working hours at special rates that will be determined in the pricing portion of this bid.
- L) As projects increase in frequency and one vendor team cannot meet the time constraints, the vendor must be able to mobilize an additional team to stay current on projects.
- M) In the case of an emergency project, the vendor must provide a team next day to start the work or move a team from another non-emergency project to the emergency project next day. The vendor will be able to add additional costs to either project in these situations based on the prices provided under Schedule A.
- N) Phone calls of all types should be returned promptly. The standard expected is no later than the next business day.
- O) Technical inquiries either written or verbal must receive a firm commitment for response. Same day response is preferred but it is recognized that some answers require research. The standard expected is a three (3) day commitment.
- P) Once a project is approved, the successful vendor must be able to commence work at a job site within five (5) business days of receipt of purchase order by vendor and devote as many resources as necessary to complete the work in a timely manner. Network Wiring may agree to a later start date on a case by case basis. Should the winning vendor be consistently unable to deliver goods within this time requirement, the contract may be terminated and awarded to the next lowest bidder.
- Q) Vendor must have the resources to work on multiple projects simultaneously when necessary.
- R) The Assistant Director of Auxiliary Enterprises and University Police shall be notified before any work is done which will create noise, smoke and/or dust, or involve soldering, welding, or other heat or flame-producing process.
- S) All tasks are to be performed in a workmanlike manner, according to standard and acceptable trade practice for the trades involved. All work must be performed in accordance with all applicable city, state, and federal codes, laws, regulations and ordinances. Knowledge of existing codes, laws, regulations and ordinances pertaining to the above work is the responsibility of the successful bidder.
- T) Vendor's employees and sub-contractors provided to Auxiliary Enterprises under this agreement may be subject to criminal background checks.

#### **DEFAULT:**

Should LSUHSC-NO seek remedy for non-performance or non-compliance through liquidated damages as opposed to contract cancellation, the following monetary penalties shall apply:

1 <sup>st</sup> Offense	\$ 500 plus withholding any outstanding payments due
2 <sup>nd</sup> Offense	\$1000 plus withholding any outstanding payments due
3 <sup>rd</sup> Offense	\$1500 plus withholding any outstanding payments due

Vendor will receive written notification of all non-performance and/or non-compliance issues within seventy-two (72) hours of the occurrence. Non-performance and/or non-compliance issues will be evaluated on a case by case basis in those instances where the breach is beyond the vendor's control

## **INSTALLATION STANDARDS**

Unless approved otherwise by LSUHSC-NO Enterprise Networking, the standards outlined in the attached documentation (Exhibit C) must be followed. Exhibit B provides examples of an acceptable level of workmanship for network installations. LSUHSC-NO Enterprise Networking may approve variations to these standards for existing installations or in extraordinary circumstances. Approval for these exceptions must be documented in plans, emails or other documents.

## **ESTIMATES**

- A) PC Support, IT Support, and Enterprise Networking often require an estimate for a project prior to submitting requests for funds to help department's budget existing funds.
- B) An initial vendor site survey and estimate may be required for any project. Initial site surveys/estimates shall be at no cost.
- C) Site surveys should be scheduled and conducted within 5 business days of the initial request unless a later date is agreed to by LSUHSC-NO Enterprise Networking.
- D) Estimates are to be submitted no later than 4 business days after the site survey has been conducted unless an extension is granted by LSUHSC-NO.

## **BILLING**

The vendor cannot invoice a job or project until the job has been declared finished to the Project Coordinator assigned to AE Network Wiring and the job has been reviewed and accepted by the appropriate PC or IT Support person and AE Network Wiring. Once accepted, the vendor must deliver an invoice for a job within ten (10) working days of acceptance. The vendor will send a separate invoice for each project with detail pricing based on the detailed services and materials attached to this bid. Each invoice must have a PO Number, an AE Order Number, the name of the AE Network Wiring representative that requested the job, and a unique job name, which will be supplied by AE Network Wiring. In addition, the invoice must contain a unique vendor invoice number, request date, and an invoice date. Invoices should be sent to:

Auxiliary Enterprises Administration  
Accounts Payables - Wiring  
1900 Perdido Street, P3-1  
New Orleans, LA 70112

The vendor should send a statement of unpaid invoices at the end of each month to the same address above.

## **INSURANCE AND LIABILITY**

The vendor shall carry public liability insurance and workmen's compensation and a certificate of insurance should be furnished at least five (5) days prior to the effective date of the contract.

The limits of such insurance shall be as specified and shall be from a company licensed to do business in the State of Louisiana.

Vendor shall not be liable for loss or damage resulting from strikes, lockouts, fires, explosion, theft, floods, riots, war, malicious mischief, storms, acts of God or other similar or dissimilar cases beyond its control. Vendor assumes no liability for accidents to persons or property except those directly due to the negligent acts or omissions of vendor or his employees. Throughout the term of this contract, vendor shall, at its cost, maintain insurance and provide the owner with current certificates of insurance for limits of liability as follows:

- Workman's compensation and employer's liability equal to or in excess of limits of workman's compensation laws in the State of Louisiana.
- Comprehensive liability for not less than \$1 million per occurrence, including bodily injury, liability, property damage liability, with the same coverage for automobile liability.

**"Insurance & Indemnification"** attachment, should be filled out and provided with the bid submittal, which is referenced on the checklist of documentation required for bid submittal.

## **SCHEDULE**

**05/19/2023- Solicitation will be posted on LaPac and in print**

**06/02/2023- All questions must be submitted**

**06/09/2023- Responses will be posted**

**06/19/2023 @ 2:00 P.M. – Bids and all supporting information is due. No bids will be accepted after this time.**

**06-19//2023 @ 2:00 P.M. – Bids will be opened.**

**Site visits may be scheduled and coordinated with Petros Christakis @ (504)680-9467 or email [pchri1@lsuhsc.edu](mailto:pchri1@lsuhsc.edu). No questions will be answered at the site visit but must be submitted in writing and addressed to Alethea Craig @ [acraig@lsuhsc.edu](mailto:acraig@lsuhsc.edu).**

Successful vendor must be prepared to begin providing services within 15 calendar days of notification of the award and issuance of the LSUHSC-NO Purchase Order that covers the agreement. If the successful vendor agrees, this support can begin any time after issuance of the LSUHSC-NO Purchase Order, prior to the 15-day deadline.

Please provide your pricing in the standard cost column and remember you are providing a cost per unit. Unit may be foot, termination, panel, test, hook, camera, etc.  
Do not include the cost of any materials. These costs are for labor only.

PLEASE PROVIDE YOUR STANDARD COST (per unit) AND EXTENDED TOTAL

TYPE	LI	DESCRIPTION	ESTIMATED QTY	STANDARD COST*	(units)	EXTENDED TOTAL
Copper Installation	1	Base price to pull multiple cables (up to three CAT6/low voltage) per foot***	10,000 feet		per foot	
	2	Price to pull multiple cables (up to six CAT6/low voltage) per foot***	1,000 feet		per foot	
	3	Price to pull a copper data (CAT6/low voltage) cable (per foot)	10,000 feet		per foot	
	4	Price to install raceway (per foot)	100 feet		per foot	
	5	Price to terminate and label cable	1100 terminations		per termination	
	6	Price to install faceplate (includes cutting sheetrock and mounting caddy clamp, if applicable. Single gang box may be provided)	150 faceplates		per faceplate	
	7	Price to test Copper/CAT6 and provide data electronically (per test).	1000 tests		per test	
	8	Price to remove a cable (up to 4 cables, per foot)***	3000 feet		per foot	
	9	Price to move existing station (up to 4 cables, per foot)***	3000 feet		per foot	
Data Closets	10	Price to install one wall mount cabinet. (2 to 4 feet)	3 cabinets		per cabinet	
	11	Price to install rack (includes securing to floor, walls and grounding) (per rack)	5 racks		per rack	
	12	Price to install one patch panel in a cabinet or rack.	25 panels		per panel	
	13	Price to install ladder system. (per foot)	50 feet		per foot	
	14	Price to install vertical cable management. (per management)	12 managements		per management	
	15	Price to install horizontal cable management. (per management)	5 managements		per management	
	16	Price to penetrate, install, and seal sleeve in firewall.	10 penetrations		per penetration	
	17	Price to penetrate, install, and seal sleeve in sheetrock wall.	20 penetrations		per penetration	
	18	Price to penetrate, install, and seal sleeve in cinder block wall.	10 penetrations		per penetration	
	19	Price to unseal and reseal penetration per code and facility requirements.	50 penetrations		per penetration	
	20	Price per foot to pull a copper trunk cable. (up to 300 pair)	250 feet		per foot	
	21	Price to terminate copper riser 25 pair telco connectors	5 risers		per 25 pair	
	22	Price to terminate copper riser punch to 110 or 66 block. (per pair)	25 pairs		per pair	
	23	Price to install fire rated plywood. (up to 4' x 8')	10 installs		per install	
Fiber-Optic	24	Price to install fiber per foot (including tagging at junction boxes and conduit entry/exit)	5000 feet		per foot	
	25	Price to install fiber enclosure in rack. (including patch panel)	20 installs		per install	
	26	Price to terminate and label one strand (single, multi, OM-4, etc)	300 terminations		per termination	
	27	Price to fusion splice one strand.	12 strands		per strand	
	28	Price to test fiber cable and furnish test result. (per strand)	300 tests		per test	
Routes	29	Price per foot to install innerduct.	100 feet		per foot	
	30	Price to install, attach, support cable tray (per foot)	100 feet		per foot	
	31	Price to install J-hooks (per hook)	100 hooks		per hook	
	32	Price to make a 2" floor penetration, seal, and install thimble	5 penetrations		per penetration	
	33	Price to make a 4" floor penetration, seal, and install thimble	5 penetrations		per penetration	
	34	Price to provide ground penetrating radar on slab for penetration.	5 penetrations		per penetration	
	35	Install flush mounted wall speakers	2 speakers		per speaker	
	36	Install flush mounted ceiling speakers	2 speakers		per speaker	
Other	37	Install surface mounted wall speakers	2 speakers		per speaker	
	38	Install surface mounted ceiling speakers	2 speakers		per speaker	
	39	Pull and terminate Creston Crescat cable	200 feet		per foot	
	40	Pull pre-made DVI cables	200 feet		per foot	
	41	Pull and terminate VGA cables, pull pre-made VGA cables	200 feet		per foot	
	42	Pull and terminate 5-wire cables	200 feet		per foot	
	43	Pull access control 18 conductor cable	300 feet		per foot	
	44	Install ceiling-mounted television (up to 65")	1000 feet		per foot	
	45	Install wall-mounted television (up to 65")	2 televisions		per television	
	46	Install video surveillance camera	5 televisions		per television	
			30 cameras		per camera	

Miscellaneous	47	Install a microwave or other small antenna on existing mast.	1 antenna	per antenna
	48	Price to install antenna mast.	1 masts	per mast
Labor	49	Labor rate for technician exclusive of fixed rate pricing listed above (per hour for labor not itemized above)	250 hours	per hour
	50	Labor rate for helper exclusive of fixed rate pricing listed above (per hour for labor not itemized above)	300 hours	per hour
Supplemental Labor	51	Price for expedited response (per hour in addition to labor rates above)	8 hours	per hour
	52	Price for expedited response (per hour in addition to labor rates above)	8 hours	per hour
	53	Additional charges for technician exclusive of fixed rate pricing listed above for work outside normal business hours (per hour)	16 hours	per hour
	54	Additional charges for helper exclusive of fixed rate pricing listed above for work outside normal business hours (per hour)	16 hours	per hour
	55	Additional charges for technician exclusive of fixed rate pricing listed above for extended difficulty (per hour)**	250 hours	per hour
	56	Additional charges for helper exclusive of fixed rate pricing listed above for extended difficulty (per hour)**	250 hours	per hour
EXTENDED BID TOTAL				

ALL ELECTRICAL TERMINATIONS ARE LOW VOLTAGE.

ALL COPPER CABLE INSTALLATIONS WILL INCLUDE PULL STRING AND FIBER INSTALLATIONS WILL INCLUDE MULE TAPE OR ROPE.

\* Drop ceilings

\*\* Extended Difficulty = Any work that requires additional labor due to difficult access or working conditions, such as hard ceilings with little access, high ceilings, difficult routes, etc.

\*\*\* Footage is determined by the test results of the average of all cable lengths from point A to point B

How to interpret \*\*\*

Example: We are installing 3 cables from the network closet to an office. All cables will be tested. In this case we would use the first line item on this bid sheet to determine the cost of installation of the cable because we are installing 3 cables or less. We will use the average of the 3 cable lengths per the test results to determine the cost of cable installation. If these test results were 156, 157, and 158 feet respectively then the length used to determine the cost would be 157 feet. The same would apply for line item number two for up to six cables. The same calculations apply for moving or removing cable.



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Do not include the cost of any materials. These costs are for labor only.

TYPE		LI DESCRIPTION	ESTIMATED QTY	STANDARD COST*	(units)	EXTENDED TOTAL
Copper Installation						
	1	Base price to pull multiple cables (up to three CAT6/low voltage) per foot***	1600		per foot	
	2	Price to pull multiple cables (up to six CAT6/low voltage) per foot***			per foot	
	3	Price to pull a copper data (CAT6/low voltage) cable (per foot)	450		per foot	
	4	Price to install raceway (per foot)			per foot	
	5	Price to terminate and label cable	67		per termination	
	6	Price to install faceplate (includes cutting sheetrock and mounting caddy clamp, if applicable. Single gang box may be provided)	9		per faceplate	
	7	Price to test Copper/CAT6 and provide data electronically (per test).	43		per test	
	8	Price to remove a cable (up to 4 cables, per foot)			per foot	
	9	Price to move existing station (up to 4 cables, per foot)			per foot	
Data Closets						
	10	Price to install one wall mount cabinet. (2 to 4 feet)			per cabinet	
	11	Price to install rack (includes securing to floor, walls and grounding) (per rack)			per rack	
	12	Price to install one patch panel in a cabinet or rack.	1		per panel	
	13	Price to install ladder system. (per foot)			per foot	
	14	Price to install vertical cable management. (per management)			per management	
	15	Price to install horizontal cable management. (per management)	1		per management	
	16	Price to penetrate, install, and seal sleeve in firewall.			per penetration	
	17	Price to penetrate, install, and seal sleeve in sheetrock wall.	1		per penetration	
	18	Price to penetrate, install, and seal sleeve in cinder block wall.			per penetration	
	19	Price to unseal and reseal penetration per code and facility requirements.			per penetration	
	20	Price per foot to pull a copper trunk cable. (up to 300 pair)			per foot	
	21	Price to terminate copper riser 25 pair telco connectors			per 25 pair	
	22	Price to terminate copper riser punch to 110 or 66 block. (per pair)			per pair	
	23	Price to install fire rated plywood. (up to 4' x 8')			per install	
Fiber-Optic						
	24	Price to install fiber per foot (including tagging at junction boxes and conduit entry/exit)			per foot	
	25	Price to install fiber enclosure in rack. (including patch panel)			per install	
	26	Price to terminate and label one strand (single, multi, OM-4, etc)			per termination	
	27	Price to fusion splice one strand.			per strand	
	28	Price to test fiber cable and furnish test result. (per strand)			per test	
Routes						
	29	Price per foot to install innerduct.			per foot	
	30	Price to install, attach, support cable tray (per foot)			per foot	
	31	Price to install J-hooks (per hook)	5		per hook	
	32	Price to make a 2" floor penetration, seal, and install thimble			per penetration	
	33	Price to make a 4" floor penetration, seal, and install thimble			per penetration	
	34	Price to provide ground penetrating radar on slab for penetration.			per penetration	
Other						
	35	1r-stall flush mounted wall speakers			per speaker	
	36	1r-stall flush mounted ceiling speakers			per speaker	
	37	1r-stall surface mounted wall speakers			per speaker	
	38	1r-stall surface mounted ceiling speakers			per speaker	
	39	Pull and terminate Creston Crescat cable			per foot	
	40	Pull pre-made DVI cables			per foot	
	41	Pull and terminate VGA cables, pull pre-made VGA cables			per foot	
	42	Pull and terminate 5-wire cables			per foot	
	43	Pull access control 18 conductor cable			per foot	
	44	1r-stall ceiling-mounted television (up to 65")			per television	
	45	1r-stall wall-mounted television (up to 65")			per television	
	46	1r-stall video surveillance camera			per camera	

Miscellaneous	47	Install a microwave or other small antenna on existing mast.			per antenna
	48	Price to install antenna mast.			per mast
Labor	49	Labor rate for technician exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
	50	Labor rate for helper exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
Supplemental Labor	51	Price for expedited response (per hour in addition to labor rates above)			per hour
	52	Price for expedited response (per hour in addition to labor rates above)			per hour
	53	Additional charges for technician exclusive of fixed rate pricing listed above for work outside normal business hours (per hour)			per hour
	54	Additional charges for helper exclusive of fixed rate pricing listed above for work outside normal business hours(per hour)			per hour
	55	Additional charges for technician exclusive of fixed rate pricing listed above for extended difficulty (per hour)**			per hour
	56	Additional charges for helper exclusive of fixed rate pricing listed above for extended difficulty (per hour)**			per hour
EXTENDED BID TOTAL					

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PLEASE PROVIDE YOUR STANDARD COST (per unit) AND EXTENDED TOTAL

TYPE	LI	DESCRIPTION	ESTIMATED QTY	STANDARD COST*	(units)	EXTENDED TOTAL
Copper Installation	1	Base price to pull multiple cables (up to three CAT6/low voltage) per foot***	120		per foot	
	2	P-price to pull multiple cables (up to six CAT6/low voltage) per foot***			per foot	
	3	P-price to pull a copper data (CAT6/low voltage) cable (per foot)	120		per foot	
	4	P-price to install raceway (per foot)			per foot	
	5	P-price to terminate and label cable	11		per termination	
	6	P-price to install faceplate (includes cutting sheetrock and mounting caddy clamp, if applicable. Single gang box may be provided)	2		per faceplate	
	7	P-price to test Copper/CAT6 and provide data electronically (per test).	6		per test	
	8	P-price to remove a cable (up to 4 cables, per foot)			per foot	
	9	P-price to move existing station (up to 4 cables, per foot)			per foot	
Data Closets	10	P-price to install one wall mount cabinet. (2 to 4 feet)			per cabinet	
	11	P-price to install rack (includes securing to floor, walls and grounding) (per rack)	1		per rack	
	12	P-price to install one patch panel in a cabinet or rack.	1		per panel	
	13	P-price to install ladder system. (per foot)			per foot	
	14	P-price to install vertical cable management. (per management)			per management	
	15	P-price to install horizontal cable management. (per management)			per management	
	16	P-price to penetrate, install, and seal sleeve in firewall.			per penetration	
	17	P-price to penetrate, install, and seal sleeve in sheetrock wall.			per penetration	
	18	P-price to penetrate, install, and seal sleeve in cinder block wall.			per penetration	
	19	P-price to unseal and reseal penetration per code and facility requirements.			per penetration	
	20	P-price per foot to pull a copper trunk cable. (up to 300 pair)	1300		per foot	
	21	P-price to terminate copper riser 25 pair telco connectors	2		per 25 pair	
	22	P-price to terminate copper riser punch to 110 or 66 block. (per pair)	120		per pair	
	23	P-price to install fire rated plywood. (up to 4' x 8')	1		per install	
	24	P-price to install fiber per foot (including tagging at junction boxes and conduit entry/exit)	1400		per foot	
	25	P-price to install fiber enclosure in rack. (including patch panel)	2		per install	
Fiber-Optic	26	P-price to terminate and label one strand (single, multi, OM-4, etc)	48		per termination	
	27	P-price to fusion splice one strand.			per strand	
	28	P-price to test fiber cable and furnish test result. (per strand)	48		per test	
	29	P-price per foot to install innerduct.	100		per foot	
Routes	30	P-price to install, attach, support cable tray (per foot)			per foot	
	31	P-price to install J-hooks (per hook)			per hook	
	32	P-price to make a 2" floor penetration, seal, and install thimble			per penetration	
	33	P-price to make a 4" floor penetration, seal, and install thimble			per penetration	
	34	P-price to provide ground penetrating radar on slab for penetration.			per penetration	
	35	Install flush mounted wall speakers			per speaker	
	36	Install flush mounted ceiling speakers			per speaker	
Other	37	Install surface mounted wall speakers			per speaker	
	38	Install surface mounted ceiling speakers			per speaker	
	39	P-Jill and terminate Creston Crescat cable			per foot	
	40	P-Jill pre-made DVI cables			per foot	
	41	P-Jill and terminate VGA cables, pull pre-made VGA cables			per foot	
	42	P-Jill and terminate 5-wire cables			per foot	
	43	P-Jill access control 18 conductor cable			per foot	
	44	Install ceiling-mounted television (up to 65")			per television	
	45	Install wall-mounted television (up to 65")			per television	
	46	Install video surveillance camera			per camera	

Miscellaneous	47	Install a microwave or other small antenna on existing mast.			per antenna
	48	Price to install antenna mast.			per mast
Labor	49	Labor rate for technician exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
	50	Labor rate for helper exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
Supplemental Labor	51	Price for expedited response (per hour in addition to labor rates above)			per hour
	52	Price for expedited response (per hour in addition to labor rates above)			per hour
	53	Additional charges for technician exclusive of fixed rate pricing listed above for work outside normal business hours (per hour)			per hour
	54	Additional charges for helper exclusive of fixed rate pricing listed above for work outside normal business hours (per hour)			per hour
	55	Additional charges for technician exclusive of fixed rate pricing listed above for extended difficulty (per hour)**			per hour
	56	Additional charges for helper exclusive of fixed rate pricing listed above for extended difficulty (per hour)**			per hour
EXTENDED BID TOTAL					

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How to interpret \*\*\*

Example: We are installing 3 cables from the network closet to an office. All cables will be tested. In this case we would use the first line item on this bid sheet to determine the cost of installation of the cable because we are installing 3 cables or less. We will use the average of the 3 cable lengths per the test results to determine the cost of cable installation. If these test results were 156, 157, and 158 feet respectively then the length used to determine the cost would be 157 feet. The same would apply for line item number two for up to six cables. The same calculations apply for moving or removing cable.

Please provide your pricing in the standard cost column and remember you are providing a cost per unit. Unit may be foot, termination, panel, test, hook, camera, etc.  
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TYPE		PLEASE PROVIDE YOUR STANDARD COST (per unit) AND EXTENDED TOTAL	
LI	DESCRIPTION	ESTIMATED QTY	(units) EXTENDED TOTAL
<b>Copper Installation</b>			
1	Base price to pull multiple cables (up to three CAT6/low voltage) per foot***	12000	per foot
2	P-price to pull multiple cables (up to six CAT6/low voltage) per foot***		per foot
3	P-price to pull a copper data (CAT6/low voltage) cable (per foot)	600	per foot
4	P-price to install raceway (per foot)		per foot
5	P-price to terminate and label cable	244	per termination
6	P-price to install faceplate (includes cutting sheetrock and mounting caddy clamp, if applicable. Single gang box may be provided)	42	per faceplate
7	P-price to test CopperCAT6 and provide data electronically (per test).	122	per test
8	P-price to remove a cable (up to 4 cables, per foot)		per foot
9	P-price to move existing station (up to 4 cables, per foot)		per foot
<b>Data Closets</b>			
10	P-price to install one wall mount cabinet. (2 to 4 feet)		per cabinet
11	P-price to install rack (includes securing to floor, walls and grounding) (per rack)		per rack
12	P-price to install one patch panel in a cabinet or rack.	7	per panel
13	P-price to install ladder system. (per foot)		per foot
14	P-price to install vertical cable management. (per management)		per management
15	P-price to install horizontal cable management. (per management)	4	per management
16	P-price to penetrate, install, and seal sleeve in firewall.		per penetration
17	P-price to penetrate, install, and seal sleeve in sheetrock wall.	1	per penetration
18	P-price to penetrate, install, and seal sleeve in cinder block wall.	1	per penetration
19	P-price to unseal and reseal penetration per code and facility requirements.		per penetration
20	P-price per foot to pull a copper trunk cable. (up to 300 pair)		per foot
21	P-price to terminate copper riser 25 pair telco connectors		per 25 pair
22	P-price to terminate copper riser punch to 110 or 66 block. (per pair)		per pair
23	P-price to install fire rated plywood. (up to 4' x 8')		per install
<b>Fiber-Optic</b>			
24	P-price to install fiber per foot (including tagging at junction boxes and conduit entry/exit)		per foot
25	P-price to install fiber enclosure in rack. (including patch panel)		per install
26	P-price to terminate and label one strand (single, multi, OM-4, etc)		per termination
27	P-price to fusion splice one strand.		per strand
28	P-price to test fiber cable and furnish test result. (per strand)		per test
<b>Routes</b>			
29	P-price per foot to install innerduct.		per foot
30	P-price to install, attach, support cable tray (per foot)		per foot
31	P-price to install J-hooks (per hook)	40	per hook
32	P-price to make a 2" floor penetration, seal, and install thimble		per penetration
33	P-price to make a 4" floor penetration, seal, and install thimble		per penetration
34	P-price to provide ground penetrating radar on slab for penetration.		per penetration
<b>Other</b>			
35	Install flush mounted wall speakers		per speaker
36	Install flush mounted ceiling speakers		per speaker
37	Install surface mounted wall speakers		per speaker
38	Install surface mounted ceiling speakers		per speaker
39	P-jill and terminate Creston Crescat cable		per foot
40	P-jill pre-made DVI cables		per foot
41	P-jill and terminate VGA cables, pull pre-made VGA cables		per foot
42	P-jill and terminate 5-wire cables		per foot
43	P-jill access control 18 conductor cable		per foot
44	Install ceiling-mounted television (up to 65")		per television
45	Install wall-mounted television (up to 65")		per television
46	Install video surveillance camera		per camera

Miscellaneous	47	Install a microwave or other small antenna on existing mast.			per antenna
	48	Price to install antenna mast.			per mast
Labor	49	Labor rate for technician exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
	50	Labor rate for helper exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
Supplemental Labor	51	Price for expedited response (per hour in addition to labor rates above)			per hour
	52	Price for expedited response (per hour in addition to labor rates above)			per hour
	53	Additional charges for technician exclusive of fixed rate pricing listed above for work outside normal business hours (per hour)			per hour
	54	Additional charges for helper exclusive of fixed rate pricing listed above for work outside normal business hours(per hour)			per hour
	55	Additional charges for technician exclusive of fixed rate pricing listed above for extended difficulty (per hour)**			per hour
	56	Additional charges for helper exclusive of fixed rate pricing listed above for extended difficulty (per hour)**			per hour
EXTENDED BID TOTAL					

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TYPE		PLEASE PROVIDE YOUR STANDARD COST (per unit) AND EXTENDED TOTAL	
LI	DESCRIPTION	ESTIMATED QTY	STANDARD COST* (units) EXTENDED TOTAL
Copper Installation	1 Base price to pull multiple cables (up to three CAT6/low voltage) per foot***		per foot
	2 Price to pull multiple cables (up to six CAT6/low voltage) per foot***		per foot
	3 Price to pull a copper data (CAT6/low voltage) cable (per foot)	4056	per foot
	4 Price to install raceway (per foot)		per foot
	5 Price to terminate and label cable	52	per termination
	6 Price to install faceplate (includes cutting sheetrock and mounting caddy clamp, if applicable. Single gang box may be provided)	26	per faceplate
	7 Price to test Copper/CAT6 and provide data electronically (per test).	26	per test
	8 Price to remove a cable (up to 4 cables, per foot)		per foot
	9 Price to move existing station (up to 4 cables, per foot)		per foot
Data Closets	10 Price to install one wall mount cabinet. (2 to 4 feet)		per cabinet
	11 Price to install rack (includes securing to floor, walls and grounding). (per rack)		per rack
	12 Price to install one patch panel in a cabinet or rack.	1	per panel
	13 Price to install ladder system. (per foot)		per foot
	14 Price to install vertical cable management. (per management)		per management
	15 Price to install horizontal cable management. (per management)		per management
	16 Price to penetrate, install, and seal sleeve in firewall.		per penetration
	17 Price to penetrate, install, and seal sleeve in sheetrock wall.	26	per penetration
	18 Price to penetrate, install, and seal sleeve in cinder block wall.		per penetration
	19 Price to unseal and reseal penetration per code and facility requirements.		per penetration
	20 Price per foot to pull a copper trunk cable. (up to 300 pair)		per foot
	21 Price to terminate copper riser 25 pair telco connectors		per 25 pair
	22 Price to terminate copper riser punch to 110 or 66 block. (per pair)		per pair
	23 Price to install fire rated plywood. (up to 4' x 8')		per install
Fiber-Optic	24 Price to install fiber per foot (including tagging at junction boxes and conduit entry/exit)		per foot
	25 Price to install fiber enclosure in rack. (including patch panel)		per install
	26 Price to terminate and label one strand (single, multi, OM-4, etc)		per termination
	27 Price to fusion splice one strand.		per strand
	28 Price to test fiber cable and furnish test result. (per strand)		per test
	29 Price per foot to install innerduct.		per foot
	30 Price to install, attach, support cable tray (per foot)		per foot
Routes	31 Price to install J-hooks (per hook)	10	per hook
	32 Price to make a 2" floor penetration, seal, and install thimble		per penetration
	33 Price to make a 4" floor penetration, seal, and install thimble		per penetration
	34 Price to provide ground penetrating radar on slab for penetration.		per penetration
	35 Install flush mounted wall speakers		per speaker
	36 Install flush mounted ceiling speakers		per speaker
	37 Install surface mounted wall speakers		per speaker
Other	38 Install surface mounted ceiling speakers		per speaker
	39 Pull and terminate Creston Crescat cable		per foot
	40 Pull pre-made DVI cables		per foot
	41 Pull and terminate VGA cables, pull pre-made VGA cables		per foot
	42 Pull and terminate 5-wire cables		per foot
	43 Pull access control 18 conductor cable		per foot
	44 Install ceiling-mounted television (up to 65")		per television
	45 Install wall-mounted television (up to 65")		per television
	46 Install video surveillance camera		per camera

Miscellaneous	47	Install a microwave or other small antenna on existing mast.			per antenna
	48	Price to install antenna mast.			per mast
Labor	49	Labor rate for technician exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
	50	Labor rate for helper exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
Supplemental Labor	51	Price for expedited response (per hour in addition to labor rates above)			per hour
	52	Price for expedited response (per hour in addition to labor rates above)			per hour
	53	Additional charges for technician exclusive of fixed rate pricing listed above for work outside normal business hours (per hour)			per hour
	54	Additional charges for helper exclusive of fixed rate pricing listed above for work outside normal business hours (per hour)			per hour
	55	Additional charges for technician exclusive of fixed rate pricing listed above for extended difficulty (per hour)**			per hour
	56	Additional charges for helper exclusive of fixed rate pricing listed above for extended difficulty (per hour)**			per hour
EXTENDED BID TOTAL					

ALL ELECTRICAL TERMINATIONS ARE LOW VOLTAGE.

ALL COPPER CABLE INSTALLATIONS WILL INCLUDE PULL STRING AND FIBER INSTALLATIONS WILL INCLUDE MULE TAPE OR ROPE.

\* Drop ceilings

\*\* Extended Difficulty = Any work that requires additional labor due to difficult access or working conditions, such as hard ceilings with little access, high ceilings, difficult routes, etc.

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How to interpret \*\*\*

Example: We are installing 3 cables from the network closet to an office. All cables will be tested. In this case we would use the first line item on this bid sheet to determine the cost of installation of the cable because we are installing 3 cables or less. We will use the average of the 3 cable lengths per the test results to determine the cost of cable installation. If these test results were 156, 157, and 158 feet respectively then the length used to determine the cost would be 157 feet. The same would apply for line item number two for up to six cables. The same calculations apply for moving or removing cable.



Please provide your pricing in the standard cost column and remember you are providing a cost per unit. Unit may be foot, term nation, panel, test, hook, camera, etc.  
Do not include the cost of any materials. These costs are for labor only.

PLEASE PROVIDE YOUR STANDARD COST (per unit) AND EXTENDED TOTAL

TYPE	LI	DESCRIPTION	ESTIMATED QTY	STANDARD COST*	(units)	EXTENDED TOTAL
Copper Installation	1	Base price to pull multiple cables (up to three CAT6/low voltage) per foot***	1075		per foot	
	2	Price to pull multiple cables (up to six CAT6/low voltage) per foot***			per foot	
	3	Price to pull a copper data (CAT6/low voltage) cable (per foot)	200		per foot	
	4	Price to install raceway (per foot)			per foot	
	5	Price to terminate and label cable	6		per termination	
	6	Price to install faceplate (includes cutting sheetrock and mounting caddy clamp, if applicable. Single gang box may be provided)	3		per faceplate	
	7	Price to test CopperCAT6 and provide data electronically (per test).	3		per test	
	8	Price to remove a cable (up to 4 cables, per foot)			per foot	
	9	Price to move existing station (up to 4 cables, per foot)			per foot	
Data Closures	10	Price to install one wall mount cabinet. (2 to 4 feet)			per cabinet	
	11	Price to install rack (includes securing to floor, walls and grounding) (per rack)			per rack	
	12	Price to install one patch panel in a cabinet or rack.			per panel	
	13	Price to install ladder system. (per foot)			per foot	
	14	Price to install vertical cable management. (per management)			per management	
	15	Price to install horizontal cable management. (per management)			per management	
	16	Price to penetrate, install, and seal sleeve in firewall.			per penetration	
	17	Price to penetrate, install, and seal sleeve in sheetrock wall.			per penetration	
	18	Price to penetrate, install, and seal sleeve in cinder block wall.			per penetration	
	19	Price to unseal and reseal penetration per code and facility requirements.			per penetration	
	20	Price per foot to pull a copper trunk cable. (up to 300 pair)			per foot	
	21	Price to terminate copper riser 25 pair telco connectors			per 25 pair	
	22	Price to terminate copper riser punch to 110 or 66 block. (per pair)			per pair	
	23	Price to install fire rated plywood. (up to 4' x 8')			per install	
Fiber-Optic	24	Price to install fiber per foot (including tagging at junction boxes and conduit entry/exit)			per foot	
	25	Price to install fiber enclosure in rack. (including patch panel)			per install	
	26	Price to terminate and label one strand (single, multi, OM-4, etc)			per termination	
	27	Price to fusion splice one strand.			per strand	
	28	Price to test fiber cable and furnish test result. (per strand)			per test	
	29	Price per foot to install innerduct.			per foot	
Routes	30	Price to install, attach, support cable tray (per foot)			per foot	
	31	Price to install J-hooks (per hook)	15		per hook	
	32	Price to make a 2" floor penetration, seal, and install thimble			per penetration	
	33	Price to make a 4" floor penetration, seal, and install thimble			per penetration	
	34	Price to provide ground penetrating radar on slab for penetration.			per penetration	
	35	Install flush mounted wall speakers			per speaker	
Other	36	Install flush mounted ceiling speakers			per speaker	
	37	Install surface mounted wall speakers			per speaker	
	38	Install surface mounted ceiling speakers			per speaker	
	39	Pull and terminate Creston Crescat cable			per foot	
	40	Pull pre-made DVI cables			per foot	
	41	Pull and terminate VGA cables, pull pre-made VGA cables			per foot	
	42	Pull and terminate 5-wire cables			per foot	
	43	Pull access control 18 conductor cable			per foot	
	44	Install ceiling-mounted television (up to 65")	800		per foot	
	45	Install wall-mounted television (up to 65")			per television	
	46	Install video surveillance camera			per camera	

Miscellaneous	47	Install a microwave or other small antenna on existing mast.			per antenna
	48	Price to install antenna mast.			per mast
Labor	49	Labor rate for technician exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
	50	Labor rate for helper exclusive of fixed rate pricing listed above (per hour for labor not itemized above)			per hour
Supplemental Labor	51	Price for expedited response (per hour in addition to labor rates above)			per hour
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Do not include the cost of any materials. These costs are for labor only.

PLEASE PROVIDE YOUR STANDARD COST (per unit) AND EXTENDED TOTAL

TYPE	LI	DESCRIPTION	ESTIMATED QTY	STANDARD COST*	(units)	EXTENDED TOTAL
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	2	Price to pull multiple cables (up to six CAT6/low voltage) per foot***			per foot	
	3	Price to pull a copper data (CAT6/low voltage) cable (per foot)	439		per foot	
	4	Price to install raceway (per foot)			per foot	
	5	Price to terminate and label cable	4		per termination	
	6	Price to install faceplate (includes cutting sheetrock and mounting caddy clamp, if applicable. Single gang box may be provided)			per faceplate	
	7	Price to test Copper/CAT6 and provide data electronically (per test):	1		per test	
	8	Price to remove a cable (up to 4 cables, per foot)	289		per foot	
	9	Price to move existing station (up to 4 cables, per foot)	200		per foot	
Data Closets	10	Price to install one wall mount cabinet. (2 to 4 feet)			per cabinet	
	11	Price to install rack (includes securing to floor, walls and grounding) (per rack)			per rack	
	12	Price to install one patch panel in a cabinet or rack.			per panel	
	13	Price to install ladder system. (per foot)			per foot	
	14	Price to install vertical cable management. (per management)			per management	
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	32	Price to make a 2" floor penetration, seal, and install thimble			per penetration	
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	43	Pull access control 18 conductor cable			per foot	
	44	Install ceiling-mounted television (up to 65")			per television	
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	55	Additional charges for technician exclusive of fixed rate pricing listed above for extended difficulty (per hour)**	6		per hour
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EXTENDED BID TOTAL					

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**Exhibit A- 2023 Network Wiring Support Bid**  
**Job Samples**

**Sample 1: Job 8009, Allied Health School of Nursing Building 6<sup>th</sup> floor classroom renovation**

The following work will be performed at 1900 Gravier Street.

A) Install the following drops in room 610 per provided map:

1. (9) two wire drops for floor boxes
  - a. Assume all routes are equal lengths with an average of 160 ft. ( $160 \times 9 = 1440$ );
    - i. Base price to pull multiple cables (up to three) to bill 1440 feet (line item 1). 2880 feet of cable installed
  - b. 36 terminations (line item 5)
  - c. Floor box plate provided and installed by project contractor
  - d. 18 cable tests (line item 7)
2. (1) three wire drop for podium
  - a. 160 ft. assuming all routes are equal lengths with average of 160 ft. per 3 cables ( $160 \times 1 = 160$  feet)
    - i. Base price to pull multiple cables (up to three) to bill 160 feet (line item 1). 480 feet of cable installed.
  - b. 6 terminations (line item 5)
  - c. 1 faceplate including single gang box (line item 6)
  - d. 3 cable tests (line item 7)

B) Perform the following actions in room 620

1. Re-terminate 4 existing 4 wire drops (office only, not the closet)
  - a. 16 terminations (line item 5)
  - b. 16 cable tests (line item 7)
  - c. 4 faceplate installations (line item 6)
2. Re-terminate 1 existing 3 wire drop (office only, not the closet)
  - a. 3 terminations (line item 5)
  - b. 3 cable tests (line item 7)
  - c. 1 faceplate installation (line item 6)

C) Install 3 AP cables distributed between room 610 and 620 per provided map.

1. 450 feet total assuming each pull is 150 feet
  - a. Use line item 3, single pulls to bill 450 feet ( $150 \times 3 = 450$  feet)
2. 6 terminations (line item 5)
3. 3 surface mount box installations (line item 6)
4. 3 cable tests (line item 7)

5. 5 J-hooks as needed (line item 31)

D) Install the following in the network closet:

1. Penetrate sheetrock and install sleeve in telecom closet (line item 17)
2. Install patch panel in telecom closet (line item 12)
3. Install horizontal management in telecom closet (line item 15)

The work includes the following:

1. Access to the floor boxes is below on the 5<sup>th</sup> floor Library via existing conduit installed by the project contractor.
2. Special jacks and blanks will be needed to for the floor boxes.
  - a. Provided by wiring vendor exclusive of contract
3. Access to the podium is through existing conduit installed by the project contractor.
4. The podium drop should be terminated in a surface mount box inside the podium.
5. The AP drops should be terminated with a 2 port surface mount box with attached patch cord.
6. Test, terminate and label copper according to campus standards.
7. Provide electronic Cat6 test results to Auxiliary Enterprises upon job completion.

**Sample 2: Job 8006, Install Fiber and 25pr Copper at the Dental School Maintenance Building**

The following work will be performed at 1100 Florida Ave

A) Install a 24 strand single mode cable from the 3rd floor cabinet in the Power Plant to the new Maintenance Building.

1. 1400 feet (Line item 24)

B) Install a 7ft equipment cabinet in the Maintenance Building.

1. Cabinet provided by LSUHSC (Line item 11)
2. Install 24 port patch panel (line item 12)
3. Install fiber enclosure (line item 25)

C) Install two locations with three Cat6 cables to each.

1. Data and Phone will terminate in different locations (Office and Rack/Demarc)

- a. Each 3 cable drop will be composed of 2 Data Cat6 (Blue color) and 1 Phone Cat6 (White color)
- b. Assume all routes are equal lengths with an average of 60 feet for Data (60 feet x 2) x 2 = 120 feet)
  - i. Base price to pull multiple cables (up to three) to bill 120 feet (line item 1). 240 feet of cable installed
  - ii. 8 terminations (line item 5)
  - iii. 4 cable test (line item 7)
- c. 120 feet total assuming each pull is 60 feet for Phone Cat6
  - i. Use line item 3, single pulls to bill 120 feet (60 x 2 = 120 feet)
  - ii. 2 termination (Jack) (line item 5) and 8 terminations (66 block) (line item 22)
  - iii. 2 cable test (line item 7)
- d. 2 faceplates installed (line item 6)

D) Install a 30" X 30" X12" box in the Power Plant and coil 300ft of slack in it.

1. Materials and Labor for box provided by wiring vendor exclusive of contract

E) Install a 12" X 12" X 6" box and install a 1" inner duct from the 30X30 box to the 12X12 box.

1. Materials and Labor for box provided by wiring vendor exclusive of contract
2. Inner duct length is 100 feet (line item 29)

F) Terminate into a fiber housing on both ends with SC connectors.

1. 48 terminations (line item 26)
2. 48 fiber test (includes both directions) (line item 28)
3. Fiber housing install (line item 25)

G) Run cable through new 2" conduit in the Maintenance Building.

1. Labor and Materials for conduit provided by wiring vendor exclusive of contract.

H) Install a 25pr cable from the Power Plant to the new Maintenance Building

1. 1300 feet (line item 20)
2. 2 terminations per 25 pair (line item 21)
3. Backboard install (line item 23)

I) Perform a transitional splice with lightning protection where the cable enters the Maintenance Building and Power plant.

1. Materials for lightning protectors are provided by wiring vendor exclusive of contract

2. 100 terminations (25 in protector / 25 out protector x 2 = 100) (line item 22)

J) Cross connect the three AT&T lines to the existing drops provided by Network.

1. 12 terminations (line item 22)

The work includes the following:

1. Fiber and 25pr will be ran through existing underground conduit
2. A backboard will be installed before attaching any telecom equipment to the wall.
3. Test, Terminate and Label Fiber and Copper according to campus standards.
4. Provide electronic Cat6 and Fiber test results to Auxiliary Enterprises upon job completion

**Sample 3: Job 8020, Medical Education Building 5th Floor Lab Renovation**

The following work will be performed at 1901 Perdido Street:

A) Install 40 standard cat6 drop (32 ceiling tile locations and 8 desktop locations)

1. Both Data Cat6 and Phone Cat6 both terminate in the same areas
  - a. Assume all routes are equal lengths with an average of 300 ft. ( $300 \times 40 = 12000$ )
    - i. Base price to pull multiple cables (up to three) to bill 12000 feet (line item 1). 36000 feet of cable installed
  - b. 240 terminations (line item 5)
  - c. 40 faceplates (line item 6)
  - d. 120 cable test (line item 7)
  - e. 34 J-hooks as needed (line item 31)

B) Install 2 cat6 drops for AP's on the 5th floor

1. 600 feet total assuming each pull is 300 feet
  - a. Use line item 3, single pulls to bill 600 feet ( $300 \times 2 = 600$  feet)
2. 4 terminations (line item 5)
3. 2 surface mount box installations (line item 6)
4. 2 cable test (line item 7)
5. 6 J-hooks as needed (line item 31)

C) Install 2 x 4' sleeves within the route. Seal penetrations as required.

1. Penetrate cinder block and install sleeve in telecom closet (line item 18)
2. Penetrate sheetrock and install sleeve in telecom closet (line item 17)



D) Install a cable management and patch panels in the telecom closet

1. 7 patch panels (line item 12)
2. 4 horizontal cable management (line item 15)

This work includes the following:

1. Following a provided map with detailed drop location and cable routes
2. Test, Terminate and Label all drops at closet and field end according to campus standards.
3. Provide electronic Cat6 test results to Auxiliary Enterprises upon job completion

**Sample 4: Job 8537, Interim LSU Hospital Time Clock cable installation**

The following work will be performed at 2021 Perdido Street:

A) Install 1 Cat5E which includes termination box and patch cord to the following floors according to provided map floor plan.

1. 2 locations in the basement level, 5 locations on the 1<sup>st</sup> floor, 1 location in the Pharmacy (trailer attached to hospital), 3 locations on the 2<sup>nd</sup> floor, 3 location on the 3<sup>rd</sup> floor, 4 locations on the 4<sup>th</sup> floor, 2 locations on the 5<sup>th</sup> floor, 2 locations on the 6<sup>th</sup> floor, 2 locations on the 7<sup>th</sup> floor, 2 locations on the 8<sup>th</sup> floor
  - a. 4056 feet total assuming each pull is 156 feet
    - iv. Use line item 3, single pulls to bill 4056 feet ( $156 \times 26 = 4056$  feet)
  - b. 52 terminations (line item 5)
  - c. 26 surface box installation (line item 6)
  - d. 26 cable test (line item 7)
  - e. 10 J-hooks (line item 31)

B) Make penetrations where necessary to facilitate cable placement. The surface mount box (biscuit) will be placed in the ceiling with a patch cable running down the wall. Penetrations are a result of the patch cable coming out of the wall at each time clock location.

1. 26 penetrations (line item 17)

C) Install a patch panels in the telecom closet

1. 1 patch panels (line item 12)

The work includes the following:

1. Use provided map for precise drop locations

2. Document all penetrations; sleeve installations and fire stop installation so that it can be inspected by the hospital Fire/Life Safety Staff.
3. Test, Terminate and Label all drops at closet and field end according to campus standards.
4. Provide electronic Cat6 test results to Auxiliary Enterprises upon job completion

**Sample 5: Job 8071, Lions Eye Center Security Cable Installation**

The following work will be performed at 2020 Gravier Street:

A) Install 2 Siamese cables to the 1<sup>st</sup> floor front door (goes to 4th floor closet by DVR)

1. Assume all routes are equal lengths with an average of 400 ft. ( $400 \times 2 = 800$ )
  - a. Base price to pull multiple cables (up to three) to bill 400 feet (line item 1).  
800 feet of cable installed

B) Install 2 Cat6 cables to 1<sup>st</sup> floor front door (goes to the 2nd floor closet)

1. Assume all routes are equal lengths with an average of 275 ft. ( $275 \times 2 = 550$ )
  - a. Base price to pull multiple cables (up to three) to bill 275 feet (line item 1).  
550 feet of cable installed
2. 10 J-hooks installed (line item 15)
3. 4 terminations (line item 5)
4. 2 surface mount boxes (line item 6)
5. 2 cable test (line item 7)

C) Install 1 Cat6 cable to the 1<sup>st</sup> floor elevator lobby (goes to 2nd floor closet)

1. 200 feet total assuming each pull is 200 feet
  - a. Use line item 3, single pulls to bill 200 feet ( $200 \times 1 = 200$  feet)
2. 5 J-hooks installed (line item 15)
3. 2 terminations (line item 5)
4. 1 surface mount box (line item 6)
5. 1 cable test (line item 7)

D) Install 2 Access Control cables to the 1<sup>st</sup> floor front door (goes to the 4th floor closet)

1. 800 feet total (line item 43)

E) Install 2 x 2-Conductor cables to the 1<sup>st</sup> floor front door (goes to the 4th floor closet)

1. Assume all routes are equal lengths with an average of 400 feet ( $400 \times 2 = 800$ )
  - a. Base price to pull multiple cables (up to three) to bill 400 feet (line item 1).  
800 feet of cable installed

The work includes the following:

1. Install J-hooks as needed
2. Test, Terminate and Label all drops and at closet and field end according to campus standards.
3. Provide Cat6 test results to Auxiliary Enterprises upon job completion.

**Sample 6: Job 8365, Stanislaus Hall cable replacement**

The following work will be performed at 450A S. Claiborne:

A) Install a new RG59 cable from the DVR to the Camera location 1.

1. 150 feet total assuming each pull is 150 feet
  - a. Use line item 3, single pulls to bill 150 feet ( $150 \times 1 = 150$  feet)
  - b. 2 terminations (line item 5)

B) Pulled out RG59 cable from the Camera location 3 to the multiplexer.

1. Moved cable 100 total feet (line item 9)

C) Reinstall existing RG59 cable using alternate path back in from the multiplexer back to the camera location.

1. Moved cable 100 total feet (line item 9)

D) Installed a new RG59 cable from the multiplexer to the camera location 2

1. 289 feet total assuming each pull is 289 feet
  - a. Use line item 3, single pulls to bill 289 feet ( $289 \times 1 = 289$  feet)
  - b. 2 terminations (line item 5)

E) Pulled out old cable from the camera location to the multiplexer.

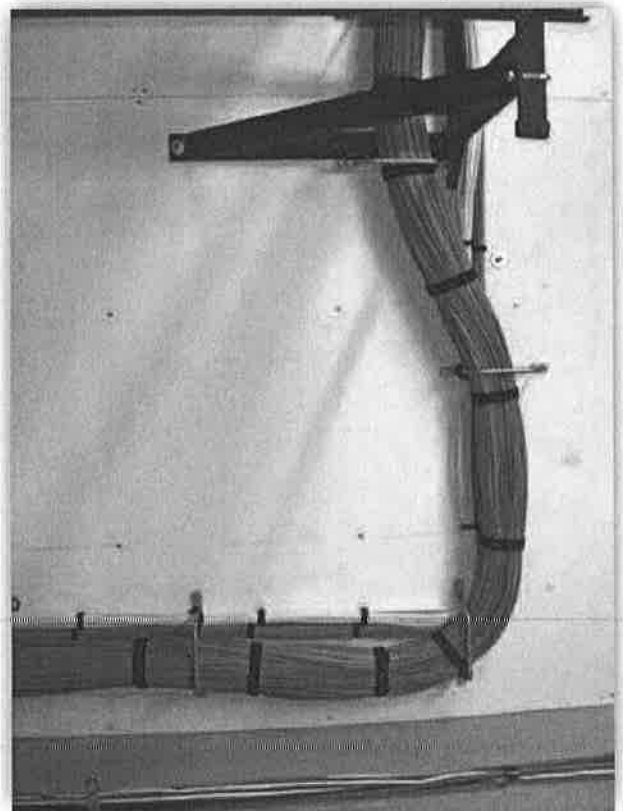
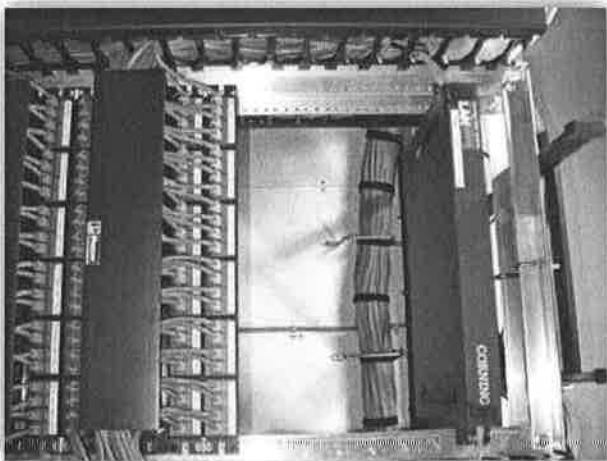
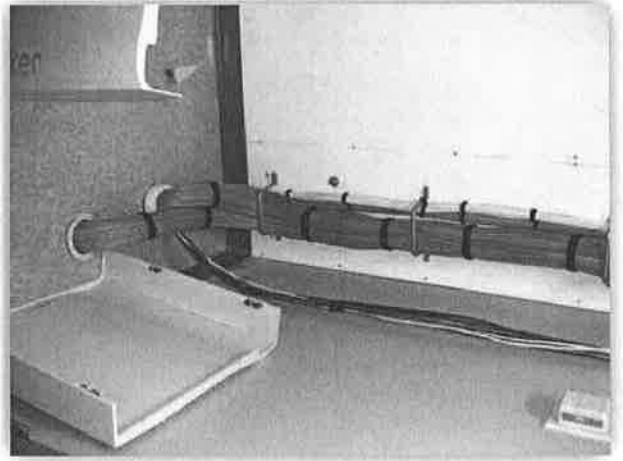
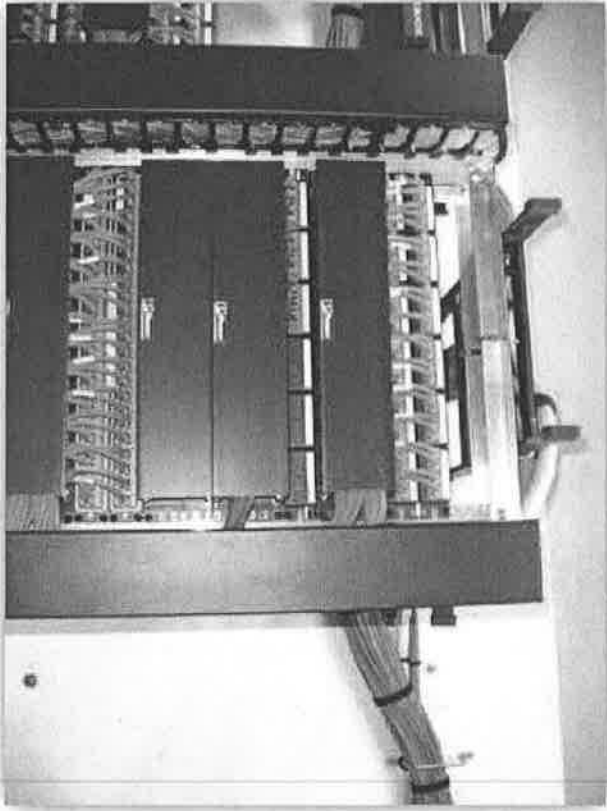
1. Demo 289 feet of cable (line item 8)

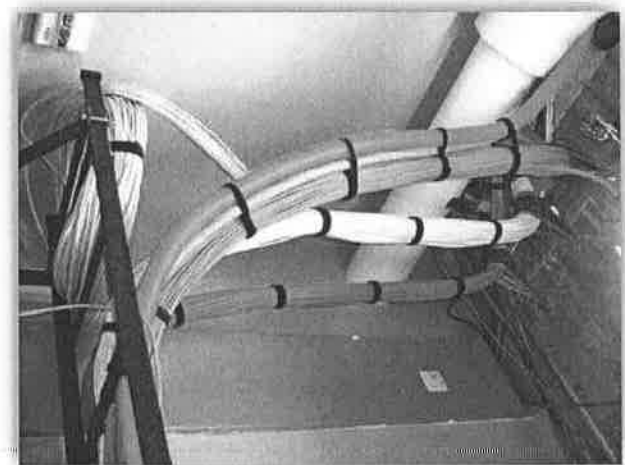
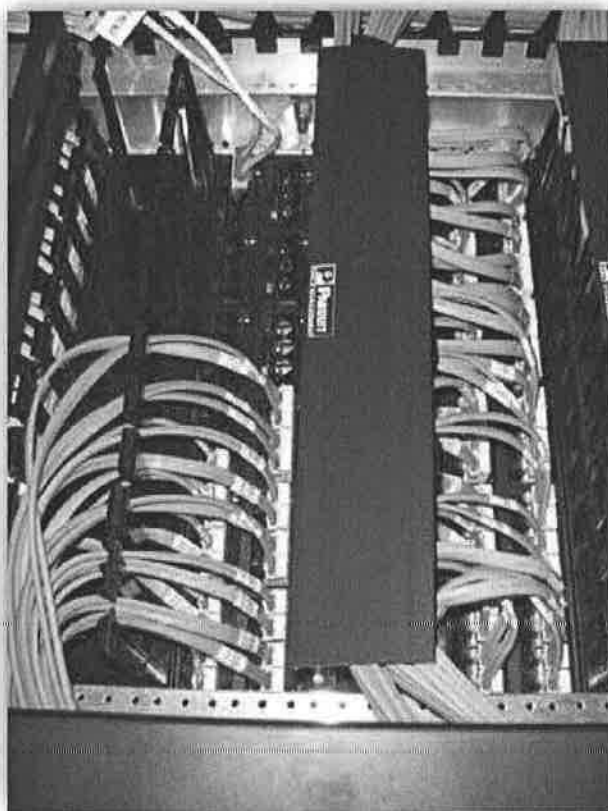
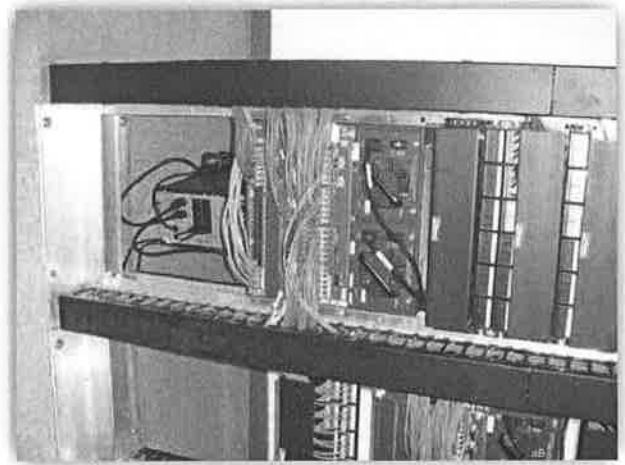
This work includes the following:

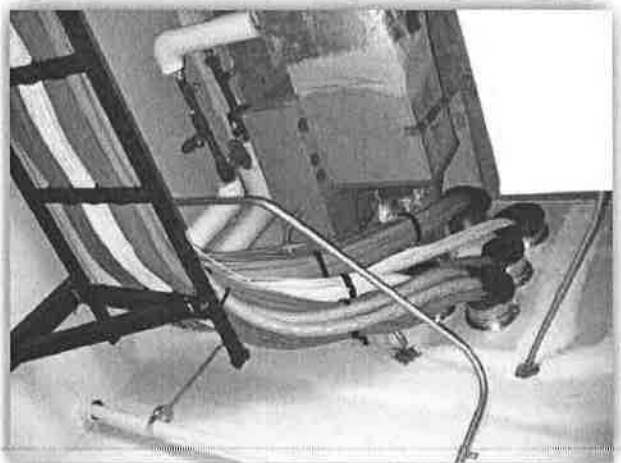
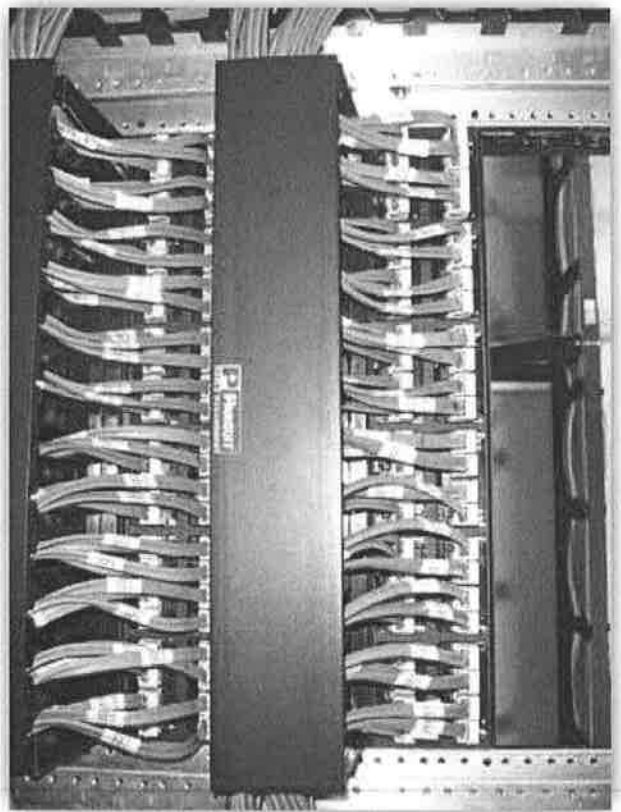
1. Termination and test
2. Provide test results to Auxiliary Enterprises upon job completion
3. Extended difficulty was added to the job so technician could troubleshoot coaxial issues.

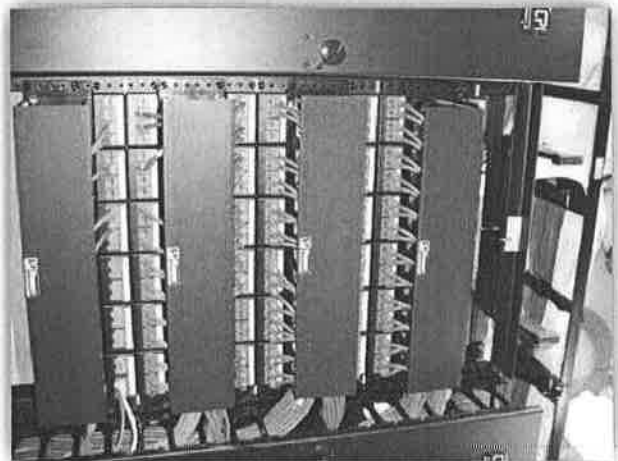
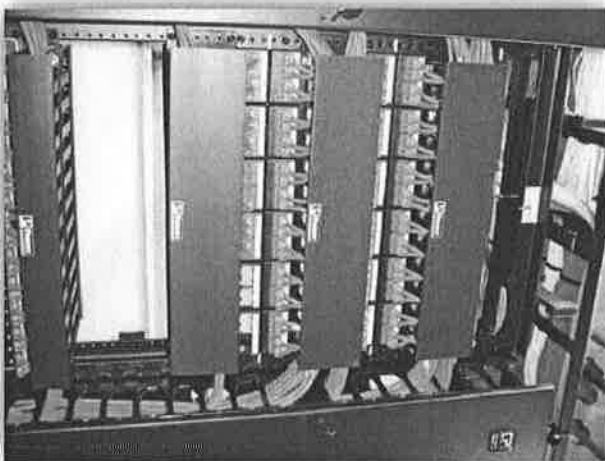
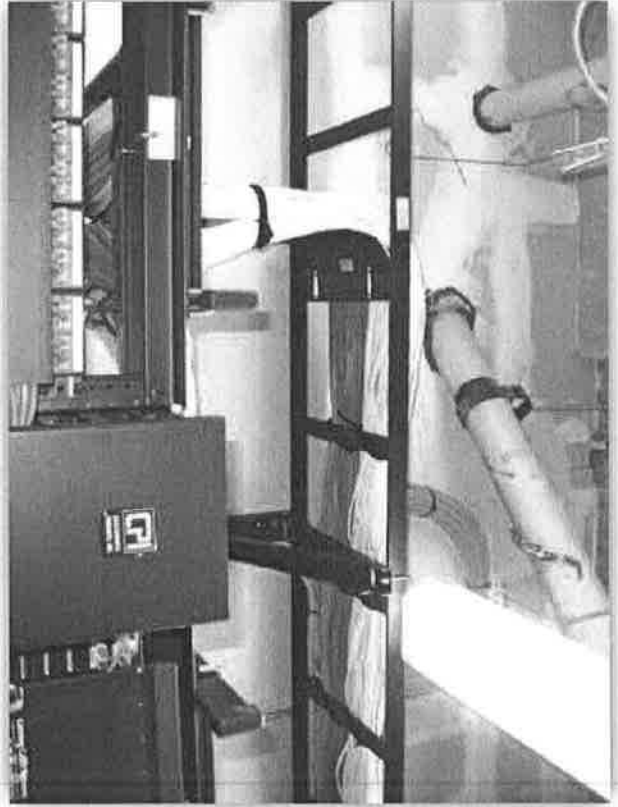
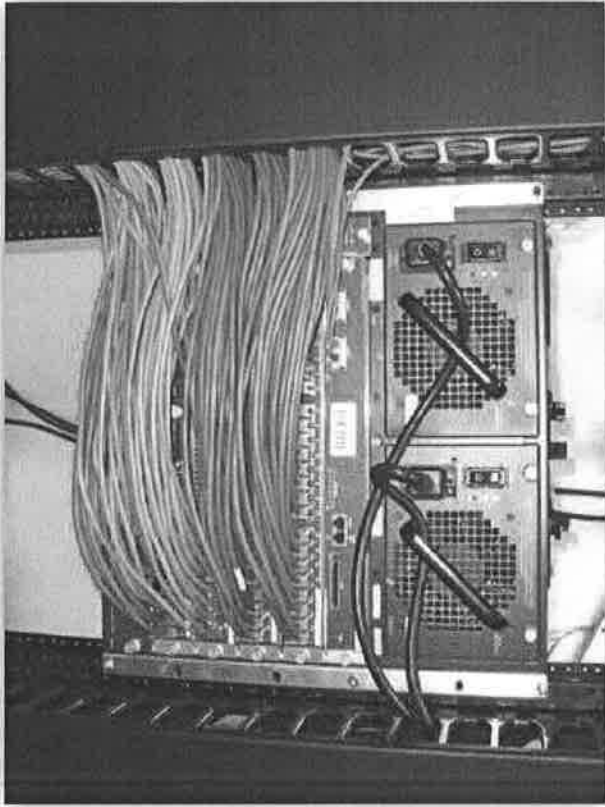
## **Exhibit B**

These photographs of existing LSUHSC network installations illustrate a minimally acceptable level of workmanship which will be required of the successful bidder.

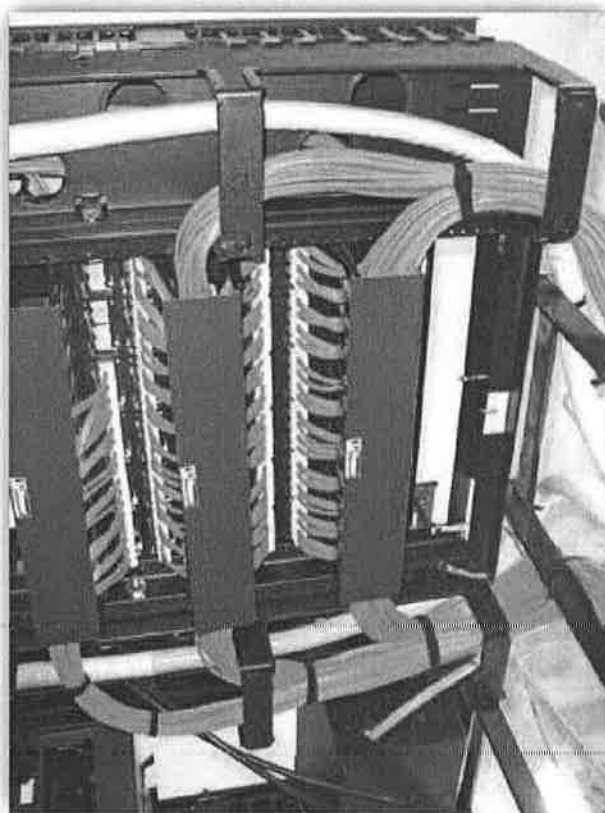
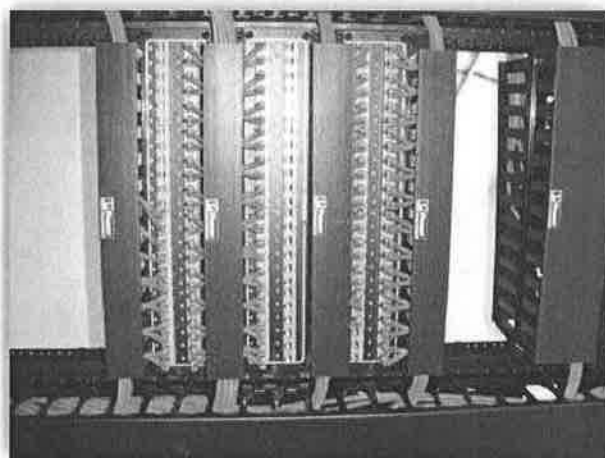














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**LSU Health New Orleans**  
**Department of Information Technology**

**Structured Cabling System: Design & Installation Standards**

**Last Revised: Monday, March 6, 2023**

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## Article I. Revision History

Date	Area of Change	Scope of Change
1/21/2011	Document	Modified document verbiage to specify strict compliance with all LSUHSC requirements.
1/21/2011	Document	Reorganized document to cover all facets of wiring build-outs.
1/21/2011	Article III, Section 3.04	Added "Contractor/Installer Requirements" section to document.
1/21/2011	Article III, Section 3.05	Added "Coordination of Work" section to document.
1/21/2011	Article IV	Revised list of applicable industry standards
1/21/2011	Article V	Added "Preferred Part Number" section to document.
1/21/2011	Article VI	Added "Before you Dig" section to document.
1/21/2011	Article VII	Added "Building Entrance Facilities" section to document.
1/21/2011	Article VIII, Section 8.06	Added "Access Controls" section to document.
1/21/2011	Article VIII, Section 8.07	Added stipulation for no 1 <sup>st</sup> Floor HCs in multi-story buildings due to flooding concerns.
1/21/2011	Article VIII, Section 8.17	Added "Electrical Emergency Disconnect" section to document.
1/21/2011	Article VIII, Section 8.19	Added labeling requirements for conduits and innerduct.
1/21/2011	Article VIII, Section 8.19	Added caveats to prevent electrolysis.
1/21/2011	Article IX, Section 9.02	Removed 6" wide vertical cable management at end of racks.
		Increased vertical cable management between racks to 10" wide.
		Specified that all racks must be grounded.
1/21/2011	Article X, Section 10.04	Added "Special Use Patch Panels" section to document.
1/21/2011	Article X, Section 10.05	Modified layout of data patch panels in racks to better utilize vertical management.
1/21/2011	Article X, Section 10.06	Modified layout of voice patch panels in racks to better utilize vertical management.
1/21/2011	Article X, Section 10.07	Modified layout of telephony patch panels in racks to better utilize vertical management.
1/21/2011	Article XI, Section 11.01	Added installation caveat regarding building infrastructure shall not be used to support horizontal cabling.
1/21/2011	Article XI, Section 11.02	Specified that cable trays must be grounded.
1/21/2011	Article XII, Section 12.02	Added "Splice Points" section to document.
1/21/2011	Article XII, Section 12.03	Added "Service Loops" section to document.
1/21/2011	Article XII, Section 12.05	Specified that intra-building fiber must use 50 micron laser optimized fiber (OM4)
1/21/2011	Article XII, Section 12.07	Added labeling requirements for fiber optics.
1/21/2011	Article XII, Section 12.08	Specified that fiber optic terminations must use fusion splices.
1/21/2011	Article XIII, Section 13.02	Updated data/voice cable colors. Data is blue, Voice is Ivory.
1/21/2011	Article XIII, Section 13.02	Added special purpose cable colors. Purple is networking. Orange is building systems.
1/21/2011	Article XIII, Section 13.05	Added labeling requirements for special purpose cabling.
1/21/2011	Article XIII, Section 13.08	Added "Special Purpose Drops" section to document.
1/25/2011	Article I	Added "Revision History" section to document.
1/26/2011	Article XII, Section 12.01	Added caveat about pulling tension and bend radius.
1/26/2011	Article XIII, Section 13.01	Added caveat about pulling tension and bend radius.
1/31/2011	Article X, Section 10.02	Added caveat regarding patch panel placement in racks.
2/23/2011	Article III, Section 3.06	Added "Removal of Abandoned Cables" section to document.
2/23/2011	Article XIII, Section 13.02	Added requirement for spacing between electrical and data outlets.
4/6/2011	Document	Rewrite to comply with R.S 38:2290

7/16/2012	Article XIII, Section 12.06	Added requirement for contractor to provide "special purpose" patch cables in cross-connect.
7/1/2016	Article III, Section 3.06	Added verbiage that contractor shall check with Network/Facilities prior to removal of abandoned cables.
8/9/2016	Article XII, Section 12.10	Added verbiage about marginal passing test results.
5/30/2017	Document	Revised document due to change in definition of a "Standard Drop"
8/7/2019	Article XII, Section 12.06	Added "Green" for Passive Poe Systems
12/11/20	Article XII, Section 12.02	Added caveat regarding cable splicing.
08/24/22	Document	Revised document including <ul style="list-style-type: none"> <li>• General document clean-up and format changes</li> <li>• Industry Standards to reference latest standards</li> <li>• Intra-building fiber from laser optimized OM-4 to single-mode fiber.</li> <li>• Rack positioning with minimum clearance.</li> <li>• UTP cabling service loops</li> </ul>
3/6/23	Article XIII	Added Preferred Parts List
3/6/23	Article XII, Section 12.15	Added wireless access point enclosure



## **Article II. Definitions, Acronyms and Units of Measure**

### **Section 2.01 Definitions**

Abandoned Cable: As defined in paragraph 800.2 of the National Electric Code, any communication cable that is not terminated on both ends at a connector or other equipment and not identified for "For Future Use" with a tag.

Backbone: A facility (e.g., pathway, cable, or conductors) between telecommunications rooms, or floor distribution terminals, the entrance facilities and the equipment rooms within or between buildings.

Cable Run: A length of installed media which may include other components along its path.

Drop: An outlet that can support data, voice, or video applications.

Faceplate: The covering for a cable outlet usually flush mounted into a wall or a termination box mounted to the surface of a wall or floor. Faceplates typically have openings or insert positions for modular jacks.

Horizontal Cabling: The cabling between and including the telecommunications outlet/connector and the horizontal cross-connect.

Horizontal Cross-connect (HC): A cross-connect of horizontal cabling to other cabling, e.g., horizontal, backbone, equipment.

Main Cross-Connect (MC): A cross-connect for first level backbone cables, entrance cables and equipment cables.

Modular Jack: An 8 position 8 conductor (8P8C) connector commonly used to terminate twisted pair cabling. An 8P8C modular connector has two paired components: the male plug and the female jack.

Pathway: A facility for the placement of telecommunications cable.

Standard Drop: A drop in a work area consisting of two color-coded ports and two color-coded wires. Generally, one drop is used to support VoIP phone and workstation and one drop is available for spare.

Structured Cabling System: A complete system of cabling and associated hardware, which provides a comprehensive telecommunications infrastructure. Installations typically include entrance facilities, equipment rooms, backbone cabling, telecommunication rooms, horizontal cabling, and work areas.

Work Area: A building space where the occupants typically interact with computer equipment.

## Section 2.02 Acronyms

ACR-F	Attenuation Crosstalk Ratio Far End
ACR-N	Attenuation Crosstalk Ratio Near End
ANSI	American National Standards Institute
AWG	American Wire Gauge
BICSI	Building Industry Consulting Service International
EMI	Electromagnetic interference
EMT	Electrical Metal Tubing
HC	Horizontal Cross-Connect
HVAC	Heating, Ventilation and Air Conditioning
IP	Internet Protocol
ISO/IEC	International Organization for Standards/ International Electrotechnical Commission
ITU	International Telecommunications Union
LSUHSC	LSU Health Sciences Center New Orleans
MC	Main Cross-Connect
NEXT	Near-end Crosstalk
NFPA	National Fire Protection Association
OS1	Optical Single-mode 1
OSI	Open Systems Interconnection
OTDR	Optical Time Domain Reflectometer
PVC	Polyvinyl Chloride
RCDD	Registered Communications Distribution Designers
RU	Rack Units
SC	Subscriber Connector
TGB	Telecommunications Grounding Busbar
TIA/EIA	Telecommunications Industry Association / Electronic Industries Association
UTP	Unshielded Twisted Pair
VoIP	Voice over IP

## Section 2.03 Units of Measure

μm	Micrometer or micron
A	Ampere
dB	Decibel
ft or '	Foot
in or "	Inch
kPa	KiloPascal
lx	Lux
V	Volt

## **Article III. Design and Installation Standards Overview**

### **Section 3.01 Purpose**

This document is intended to provide a basic framework for the design specifications and requirements for all structured cabling system installations.

All campus renovations projects to existing work areas and new building construction shall include drawings for each structured cabling system sub-system (if applicable).

This document details the minimum performance criteria for all components which comprise a structured cabling system, including product specifications, design considerations and installation guidelines.

### **Section 3.02 Caveats**

An authorized representative of the LSUHSC Department of Information Technology must approve all deviations from these standards in writing prior to implementation of the deviation.

All structured cabling system installations must be coordinated through the LSUHSC Department of Information Technology.

All construction projects must be approved by and coordinated through the LSUHSC Department of Property and Management.

The contractor is responsible for ensuring that all products selected are mated to interoperate such that the overall performance capability and usefulness of the structured cabling system is not degraded.

### **Section 3.03 Scope**

This document applies to all LSUHSC facilities including all new construction and renovations to existing facilities or work areas.

These standards shall apply to all work performed by LSUHSC staff, contractors, sub-contractors and technicians.

### **Section 3.04 Contractor/Installer Requirements**

This document is subject to revisions and modifications as necessary to maintain support and compatibility with changing construction techniques and technological developments.

The contractor/installer shall:

- Verify compliance with the most recent revision of this document and all applicable standards.
- Adhere to all applicable building, fire, and/or life safety codes, State laws and industry standards.
- Furnish all labor, supervision, tooling, miscellaneous mounting hardware and consumables for each cabling system installed.
- Remove all trash and debris daily.
- Submit all documentation that is necessary for a manufacturer provided warranty and/or a contractor/installer provided warranty. The warranty terms and conditions and coverage period shall be clearly stated.

### **Section 3.05 Coordination of Work**

Serving as both an Academic Medical Center and a Healthcare Provider, it is often necessary that installations must be scheduled around daily business activities, such as classes and/or clinics.

Therefore, the contractor shall coordinate with the LSUHSC Department of Information Technology so that all necessary work will be accomplished in an orderly and timely manner with a minimal amount of disruption.

## **Article IV. Applicable Standards**

### **Section 4.01 Caveats**

In general, the following standards are to be used as minimum standards.

Compliance with the latest revision and all addenda for each of the applicable standards listed below is required.

In the event of ambiguities regarding requirements, the more stringent standard shall be adhered to. The LSUHSC Department of Information Technology will determine the more stringent standard that shall be adhered to.

### **Section 4.02 State of Louisiana Standards**

State of Louisiana, Division of Administration: Facility, Planning & Control, Guideline Requirements, Specifications and Wiring Diagrams for Communications Cable/Wire and Related Building Facilities

### **Section 4.03 BICSI Standards**

Telecommunications Distribution Methods Manual

### **Section 4.04 ISO Standards**

ISO 9001: Quality Management Systems - Requirements

### **Section 4.05 ITU Standards**

ITU-T G.652.D: Characteristics of a single-mode optical fibre cable

ITU-T G.651: Characteristics of a 50/125 mm multimode graded index optical fibre cable

### **Section 4.06 NFPA Standards**

NFPA 70: National Electric Code

NFPA 75: Standard for the Protection of Information Technology Equipment

NFPA 101: Life Safety Code

### **Section 4.07 TIA/EIA Standards**

TIA/EIA-526: Standard Test Procedures for Fiber Optic Systems

TIA/EIA-568: Commercial Building Telecommunications Wiring Standard

TIA/EIA-569: Telecommunications Pathways and Spaces

TIA/EIA-598: Optical Fiber Cable Color Coding

TIA/EIA-606: Administration Standard for the Telecommunications

TIA/EIA-607: Generic Telecommunications Bonding and Grounding for Customer Premises

TIA/EIA-758: Customer-Owned Outside Plant Telecommunications Infrastructure Standard

TIA/EIA-942: Telecommunication Infrastructure Standard for Data Centers

TIA/EIA-1179: Healthcare Facility Telecommunications Infrastructure Standard

## **Article V. Underground Excavation**

All underground excavations shall adhere to Louisiana Revised Statute (RS) 40:1749.11 to 1749.27.

The contractor shall be responsible for contacting the regional notification centers prior to excavations so that utility providers in the area are properly notified and have adequate time to identify services.

All damages caused by the contractor shall be repaired at contractor's expense.

## **Article VI. Building Entrance Facilities**

Every building should be constructed to allow for diverse entrance paths for telecommunication providers and/or inter-building fiber optic connectivity.

Telecommunication provider paths shall consist of a minimum of two 4" rigid metallic conduit pathways, fully populated with innerducts and pull-strings, from a hand-hole located on the property line into the building telecommunications room.

Hand-holes shall be a minimum of 24" wide x 36" length x 24" deep.

All non-rated copper or optical cables (i.e. outdoor cable plant) must transition to indoor rated cables within 50' of building entrance unless they are encapsulated in EMT or rigid conduit.

Pull strings shall be ¼" 500 lb strength pull rope.

No section of conduit shall be longer than 100' or contain more than two 90° bends between pull points or pull boxes.

The telecommunications room must have 4' x 8' x ¾" fire-rated plywood installed on the wall near the 4" conduit penetrations.

A TGB with #6 AWG ground wire to the main power ground for the building must be installed.

The actual point of entrance for all cable paths into LSUHSC facilities must be approved by the LSUHSC Department of Property and Facilities Management.

## **Article VII. Cross-Connect Design**

### **Section 7.01 General**

The Cross-Connect is the room where the horizontal and/or backbone cabling is terminated, and network electronics are installed. Depending on function, a cross-connect may serve as a MC, as an HC, or as both.

TIA/EIA-569 provides a standard for the design and construction of the cross-connect.

### **Section 7.02 Caveats**

All applicable local, state, and federal codes shall be observed for the design of the cross-connect.

The cross-connect shall be dedicated to the telecommunications function and related support facilities.

The cross-connect shall not be shared with electrical installations other than those for telecommunications. Equipment not related to the support of the cross-connect (e.g., piping, ductwork, pneumatic tubing, plumbing, etc.) shall not be installed in, pass through, or enter the cross-connect.

### **Section 7.03 Asbestos Safety**

A review of the current location, extent and condition of asbestos will be required. The construction of the cross-connect shall be such that the safety of the occupants of the building is not jeopardized before, during, or after construction.

If asbestos is determined to exist within the open areas of the cross-connect, sufficient notification shall be prominently displayed so that all people entering the room are informed of the risks of doing so.

## Section 7.04 Fire Protection

Fire protection of the cross-connect shall be provided as per applicable code. All sprinkler heads shall be provided with wire cages to prevent accidental operation.

## Section 7.05 Entry Door

The entry door shall be a minimum of 36" wide and 80" high, without a doorsill and fitted with a lock.

Code permitting, doors shall swing outward. Otherwise, inward door swing will be determined by the door placement such that the swing of the door opens into the nearest wall.

## Section 7.06 Access Controls

Access to each cross-connect shall be tightly controlled and each room shall at a minimum be secured with a high security lock.

If additional security is deemed necessary by the LSUHSC Department of Information Technology, then the installation of proximity readers, electronic door strikes, and request-to-exit motion sensors or similar components shall be required.

## Section 7.07 Location

The cross-connect shall be in an accessible area on each floor and shall be located as close as possible to the center of the building or the area being serviced. In multi-story buildings, if possible, there should not be a cross-connect located on the 1<sup>st</sup> floor to limit exposure from flooding.

All cross-connects within multi-story buildings shall be vertically stacked.

The cross-connect shall not be located adjacent to any electrical, mechanical, or other areas that are likely to emit EMI.

## Section 7.08 Sizing

TIA/EIA-568 provides a standard for the sizing of cross-connects in commercial buildings. TIA/EIA-1179 provides a standard for the sizing of cross-connects in Healthcare Facilities.

Cross-connect sizing is generally based on the square footage of the area being serviced. Additional requirements such as density of drops in the service area or additional equipment that must be in the cross-connect may however require additional space.

Refer to table 1 below for the TIA/EIA minimum cross-connect size requirements.

Serving Area (Ft <sup>2</sup> )	Minimum Cross-Connect Size
10000	10' x 11'
8000	10' x 9'
5000	10' x 7'
For support of additional services such as AV or Building MC services	10' x 16' or larger
Healthcare	10' x 13' or larger

Table 1: TIA/EIA Minimum Cross-Connect Sizing

If the floor size to be serviced exceeds 10,000 ft<sup>2</sup> or if distances between the cross-connect and work area exceeds 295', additional cross-connects will be required.

### **Section 7.09 Ceiling**

For maximum flexibility, a false ceiling shall not be installed. The structural ceiling shall be painted white.

### **Section 7.10 Walls**

A minimum of three walls shall be covered with rigidly fixed  $\frac{3}{4}$ " A-C plywood, preferably void free, 8' high, capable of supporting attached equipment.

Plywood shall be either fire-rated and/or covered with two coats of fire-retardant paint and shall be installed in a horizontal orientation beginning 4' from the floor.

All walls shall be painted white to enhance room lighting.

### **Section 7.11 Flooring**

Flooring shall consist of vinyl composition tile, off-white in color.

### **Section 7.12 Lighting**

Fluorescent lighting shall be a minimum of 500 lx (50-foot candles) mounted a minimum of 9' above finished floor.

Lighting fixtures should not be powered from the same electrical distribution panel as the network electronics installed in the cross-connect.

Dimmer switches shall not be used.

To prevent EMI, lighting fixtures shall be kept a minimum of 18" away from cable pathways.

Emergency lighting and signs shall be properly placed such that an absence of light will not hamper emergency exit.

### **Section 7.13 Floor Loading**

The cross-connect shall be located on floor areas designed with a minimum floor loading of 2.4 kPa (50 lb f/ft<sup>2</sup>).

Contractor shall verify that concentrations of proposed equipment do not exceed the floor loading limit.

If unusually heavy equipment is anticipated, these specifications may have to be increased.

### **Section 7.14 Penetrations**

Penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with NFPA and State Fire Marshal requirements.

There shall be a minimum of four 4" slab penetrations per cross-connect in order to reach cross-connects on lower floors. In buildings without a cross-connect on the 1<sup>st</sup> floor, additional penetrations may be required in the 2<sup>nd</sup> floor cross-connect to accommodate drops from the 1<sup>st</sup> floor.

Penetrations shall be placed such that

- Where a slot is used, it shall have a minimum 1" curb around the top of the slot.
- Where a sleeve is used, it shall extend 1" – 3" above the floor.

Penetrations must be free of sharp edges so that cables will not be damaged.

Penetrations shall be sufficient to allow access to the main horizontal distribution pathway.

### **Section 7.15 HVAC**

Planning for continuous HVAC (24 hours per day and 365 days per year) shall be included in the initial design.

HVAC shall be designed to maintain the cross-connects temperature the same as the adjacent office area. Ambient room temperature should be between 68° – 72° F.

A positive pressure shall be maintained with a minimum of one air change per hour, or as required by applicable code. When active devices (heat producing equipment) are present, enough air changes should be provided to dissipate the heat. The LSUHSC Department of Information Technology will provide the necessary heat dissipation information for all electronics that will be installed in the cross-connect to determine cooling requirements.

If a standby power source is available in the building, the HVAC system serving the cross-connect should be connected to the standby supply.

### **Section 7.16 Electrical**

As electrical requirements vary by installation, the LSUHSC Department of Information Technology will provide the electrical circuit requirements including receptacle types and locations within each cross-connect prior to construction.

If standby power will be available, automatic transfer switchover of power should be provided.

Outlet faceplates to designate emergency power shall be red in color.

Outlet faceplates to designate building power shall be gray in color.

### **Section 7.17 Electrical Emergency Disconnect**

Each cross-connect shall have a properly sized non-fusible safety switch disconnect installed, configured such that all outlets within the room are isolated when switched off.

The electrical emergency disconnect shall be mounted on the wall immediately inside of the door such that it is reachable without entering the cross-connect.

### **Section 7.18 Grounding**

Refer to Article XIII for preferred parts list.

As per TIA/EIA-607, each cross-connect shall contain a TGB.

TGBs shall be located inside the cross-connect and be insulated from its support; a 2" separation is recommended.

TGBs shall be located to provide the greatest flexibility and accessibility for telecommunications system grounding. Multiple TGBs may be installed within the same closet to aid in minimizing bonding conductor lengths and terminating space.

## **Article VIII. Cross-Connect Build-out**

### **Section 8.01 General**

The specifications detailed in the following section are the "general" design requirements for each cross-connect.

Refer to figures 1 through 5 for an overhead, front, and side view showing an example of a typical MC or HC build-out.

### **Section 8.02 Caveats**

Typical designs may need to be modified due to the room orientation, room dimensions, cable entrances facilities, drop density and/or voice and video requirements.

### **Section 8.03 Racks**

Racks shall be at least 7' in height. Racks greater than 7' may be needed in areas where higher port density requirements exist.

Racks shall support 19" rack-mount widths.

RU should be clearly marked on the racks.

A minimum of three racks shall be installed in each HC.



A minimum of four racks shall be installed in the MC.

Racks shall be installed and secured as per the manufacturer's installation instructions.

Racks shall be positioned within the cross-connect to allow access to both the front and rear of all racks. A minimum of 48" of clearance shall exist between the front of the rack and the wall and the rear of the rack and the wall.

Racks shall be positioned within the cross-connect to allow the entry door to be fully opened.

Racks shall be properly grounded.

#### **Section 8.04 Vertical Cable Management**

Refer to Article XIII for preferred parts list.

Vertical cable management shall be a minimum of 10" wide.

Vertical cable management shall be double-sided to allow routing of cables from both front and rear.

Vertical cable management shall include hinged doors to hide cables.

Vertical cable management shall be installed between each rack in the cross-connect.

Vertical cable management shall be installed and secured as per the manufacturer's installation instructions.

#### **Section 8.05 Cable Runway Installation**

Refer to Article XIII for preferred parts list.

Cable runways shall be a minimum of 18" wide and black in color.

Cable runways shall be installed and secured as per the manufacturer's installation instructions.

Cable runways crossing above racks shall be secured to and supported above each rack using a cable runway standoff support.

Cable runways shall be properly grounded.

#### **Section 8.06 Cable Runway Drops**

Refer to Article XIII for preferred parts list.

Cable runway drops shall be installed to accommodate the cable bend radius to transition cable routing from horizontal cable runways and into each of the vertical cable managements.

Cable runway drops shall be mated for 18" cable runway.

Cable runway drops shall be installed and secured as per the manufacturer's installation instructions.

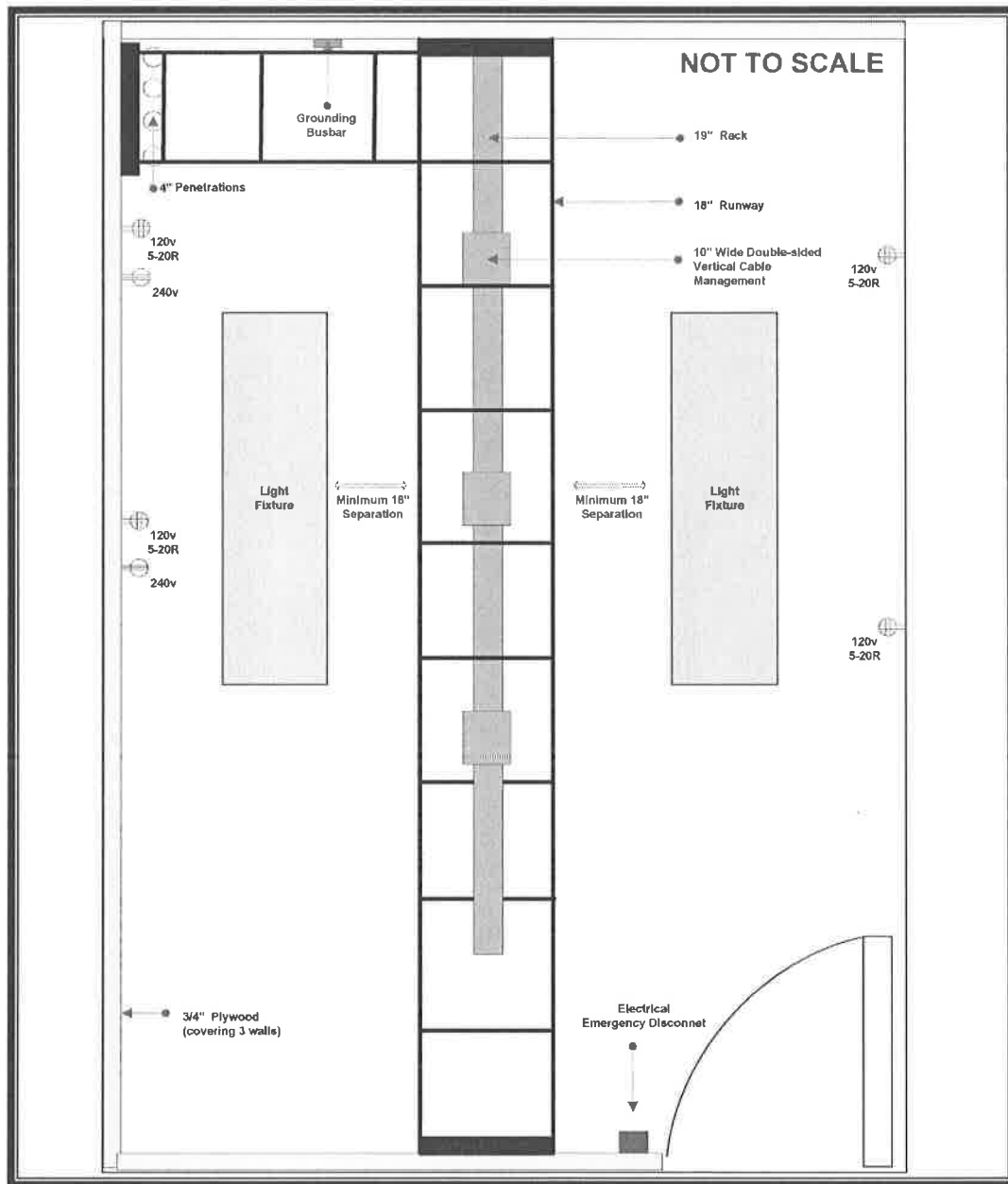


Figure 1: Main Cross-Connect Overhead View

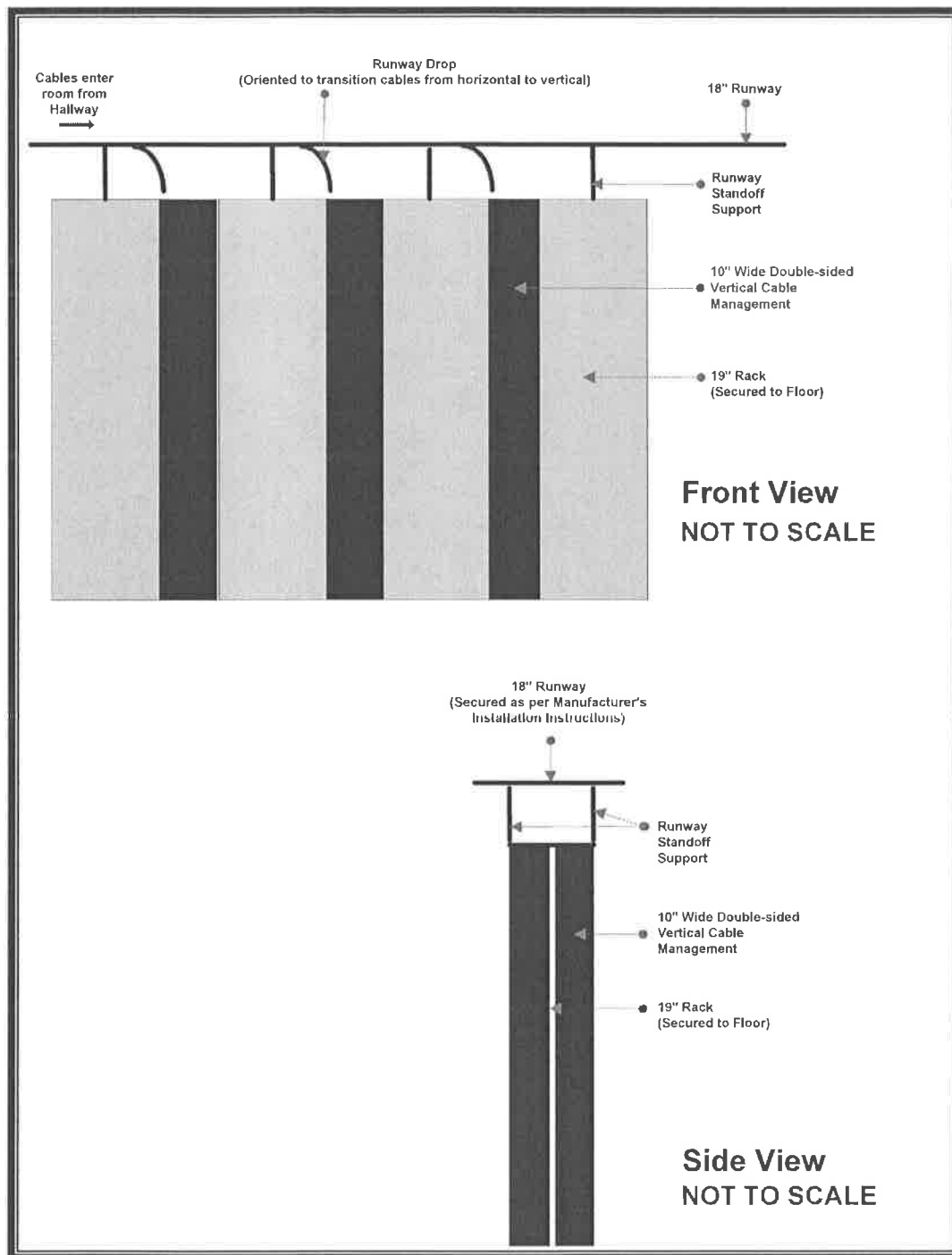
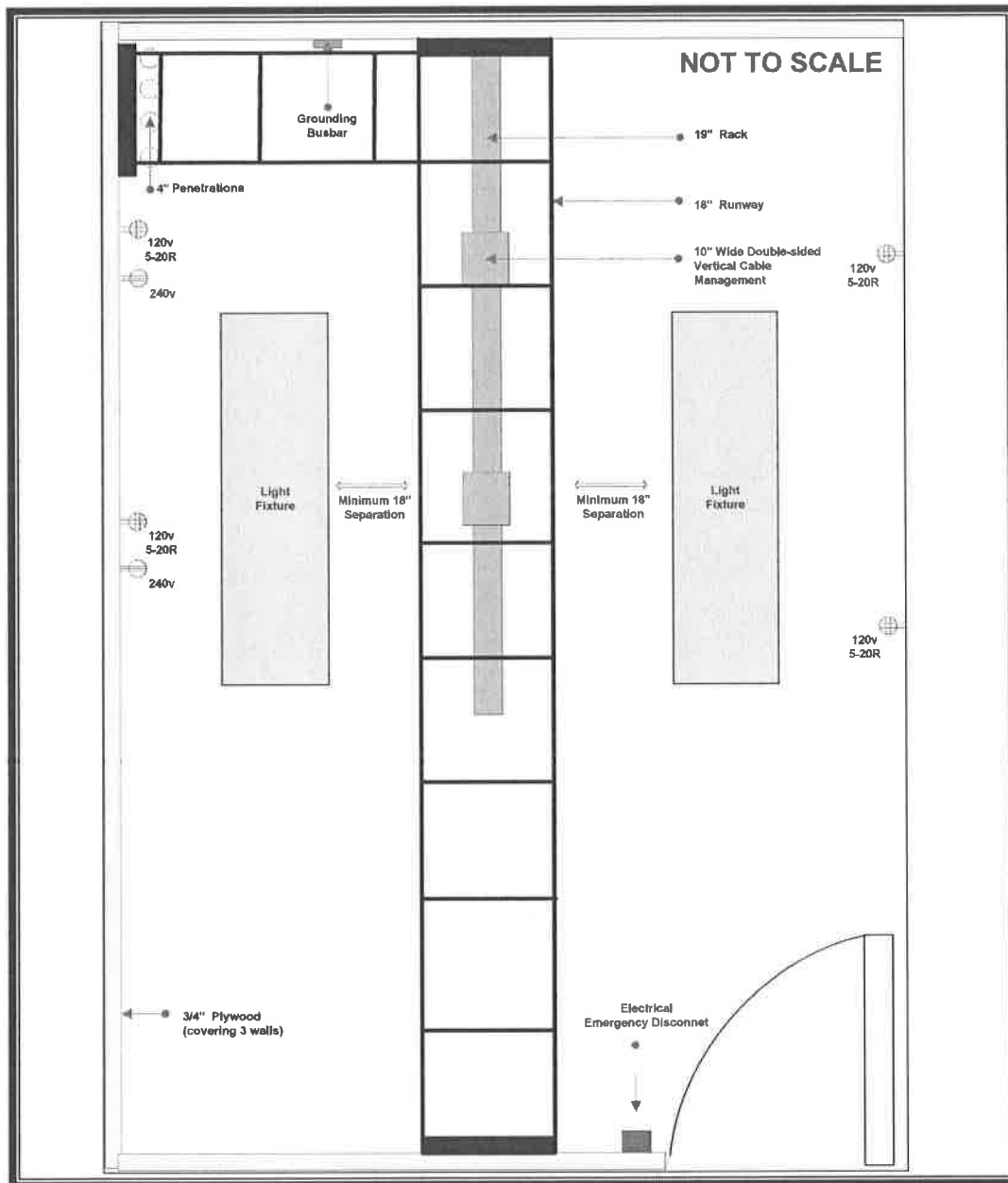


Figure 2: Main Cross-Connect Front and Side View



**Figure 3: Horizontal Cross-Connect Overhead View**

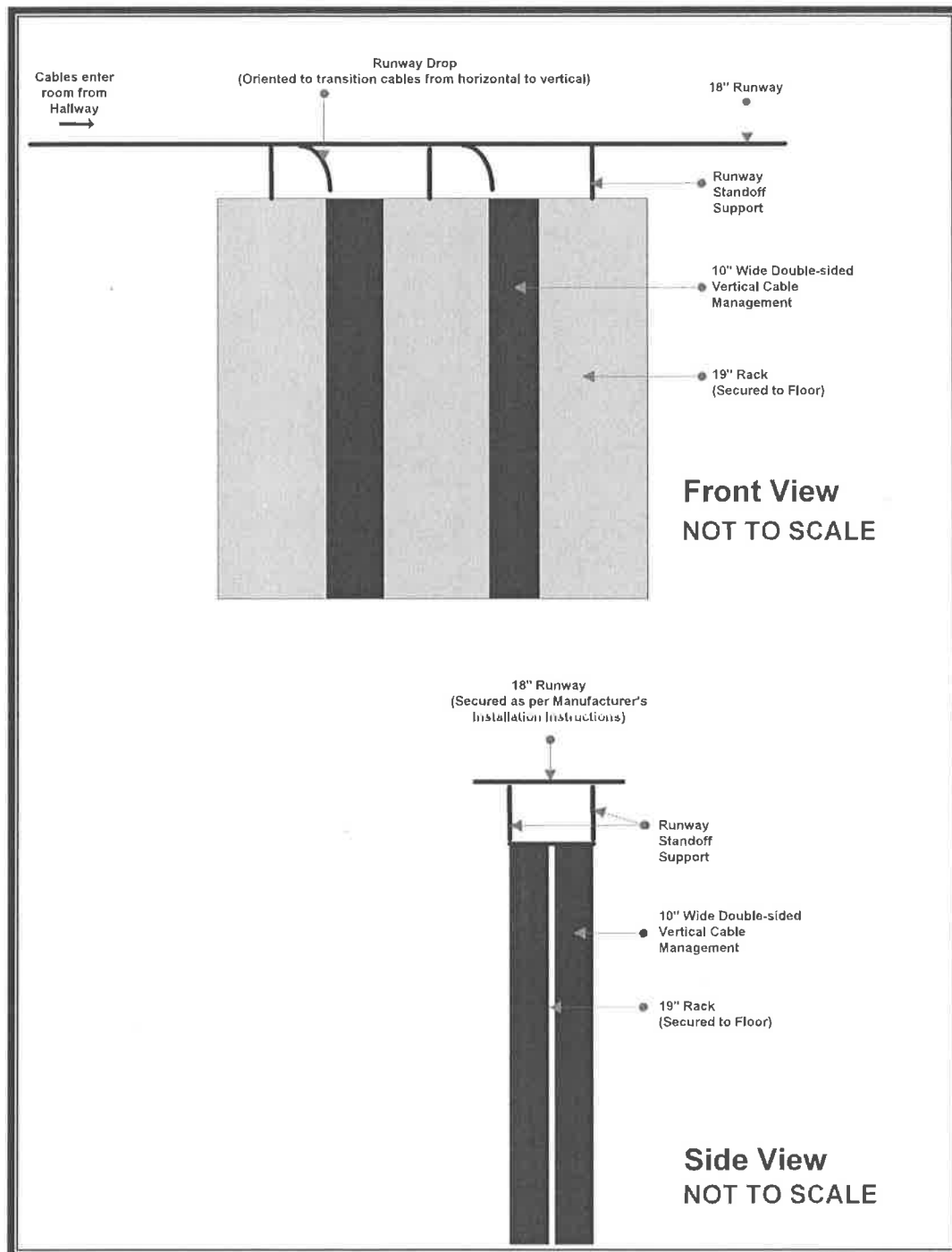
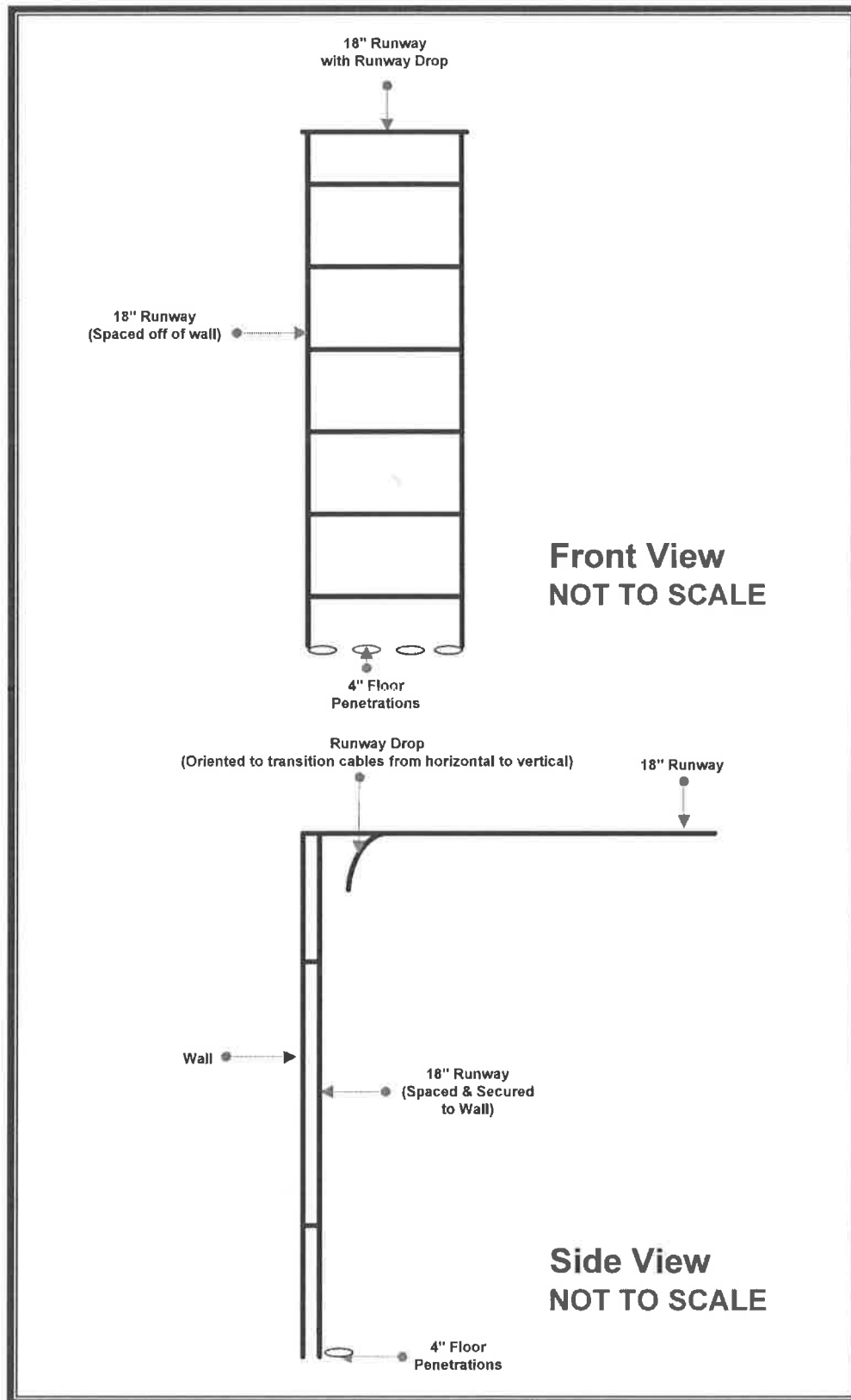


Figure 4: Horizontal Cross-Connect Front and Side View Rack Layout



**Figure 5: Vertical Cable Management**

## **Article IX. Rack Layout**

### **Section 9.01 General**

Each HC build-out consists of a three-rack system.

When facing the front of the racks,

- The left most rack is designated as Data Rack 1.
- The middle rack is designated as the Network Rack.
- The right most rack is designated as Data Rack 2.

In addition to the HC racks, the MC shall have an additional rack positioned left of the HC racks that will be designated as the Core Network Rack.

Refer to the figure 6 for a typical MC rack layout and to figure 7 for a typical HC rack layout.

### **Section 9.02 Caveats**

Typical rack layouts may need to be modified due to the drop types and density. The LSUHSC Department of Information Technology will provide the necessary guidance to installers for the rack layout.

### **Section 9.03 Fiber Optic Enclosures**

Refer to Article XIII for preferred parts list.

Fiber optic enclosures shall be 19" rack mountable and shall accommodate fiber optic termination capacity for a minimum of 24 strands of fiber optics.

Fiber optic enclosures shall be black in color.

In the HC, install a fiber optic enclosure for the intra-building fiber optics at the top of the Core Network Rack.

In the MC, install fiber optic enclosures for inter-building and intra-building fiber optics beginning at the top of the Core Network Rack. Inter-building fiber optics shall be housed in a separate enclosure from Intra-building fiber optics.

If multiple fiber optic enclosures are utilized in the MC for intra-building fiber, fiber optic enclosures should be arranged such that room numbers appear in a descending order from top to bottom.

Fiber optic enclosures shall be labeled with a machine etched hard plastic label.

Fiber optic enclosures labels supporting intra-building fiber shall specify at a minimum the remote room number where the fiber optics terminates.

Fiber optic enclosures labels supporting inter-building fiber shall specify at a minimum the remote building name and room number where the fiber optics terminate.

### **Section 9.04 Patch Panels**

Refer to Article XIII for preferred parts list.

Patch panels shall be 19" rack mountable.

Patch panels shall have a 24 or 48-port capacity and support modular jacks. Jacks shall be populated in a left to right fashion.

In high density environments, angled patch panels shall be utilized.

When possible, cables should be installed in the patch panels in sequence number order to simplify locating specific ports.

Patch panels shall have machine printed labels with plastic label covers. Labeling shall be identical to the respective faceplate in the work area.

## **Section 9.05 Patch Panel Usage**

The LSUHSC Department of Information Technology will specify the organization of the modular jacks across the various patch panels listed below:

(a) Data Patch Panels

Data patch panels shall be positioned beginning in the upper portion of data rack 1 and data rack 2.

Drops shall be split equally between data rack 1 and data rack 2.

(b) Special Use Patch Panels

In the network rack, below the network electronics, a minimum of two 48-port patch panels shall be installed.

One patch panel will support modular jack terminations for special network systems, such as access points and digital signage while the second patch panel will support terminations for building & security systems, such as HVAC monitoring, access control systems, IP video cameras, etc.

Additional patch panels may be required depending on drop density.

(c) Telephony Cross-Connect Patch Panels

A minimum of one 48-port patch panels to support the Analog telephone infrastructure will be installed in the network rack below the special use patch panels.

Details for cross-connect instructions to connect to the telephone infrastructure is outside the scope of this document. Consult the LSUHSC Department of Information Technology Telephony Standards for details on the installation and labeling requirements.

## **Section 9.06 Horizontal Cable Managements**

Refer to Article XIII for preferred parts list.

Horizontal cable managements shall be 19" rack mountable.

Horizontal cable managements for the purpose of managing patch cable shall have hinged covers.

Horizontal cable managements for horizontal cable shall utilize D rings.

Horizontal cable managements shall be properly sized for the number of cables to be managed.

Horizontal cable managements shall be installed between all flat patch panels.

Horizontal cable managements are not required if utilizing angled patch panels.



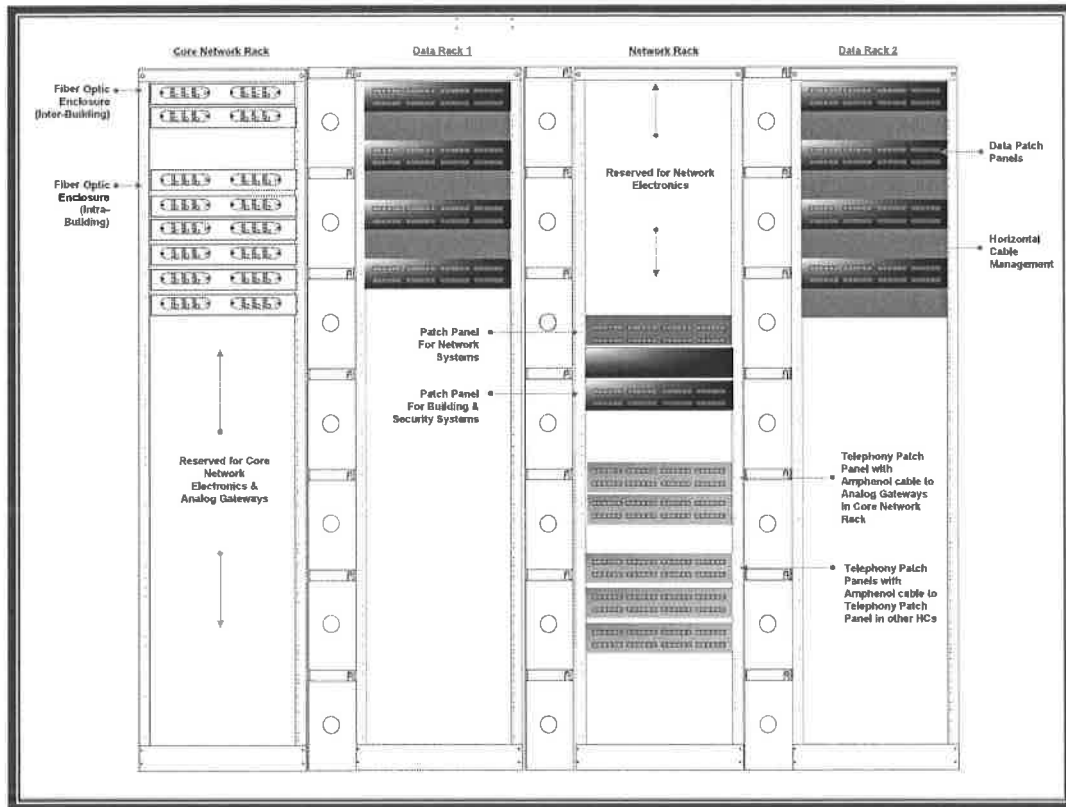


Figure 6: Sample MC Rack Layout

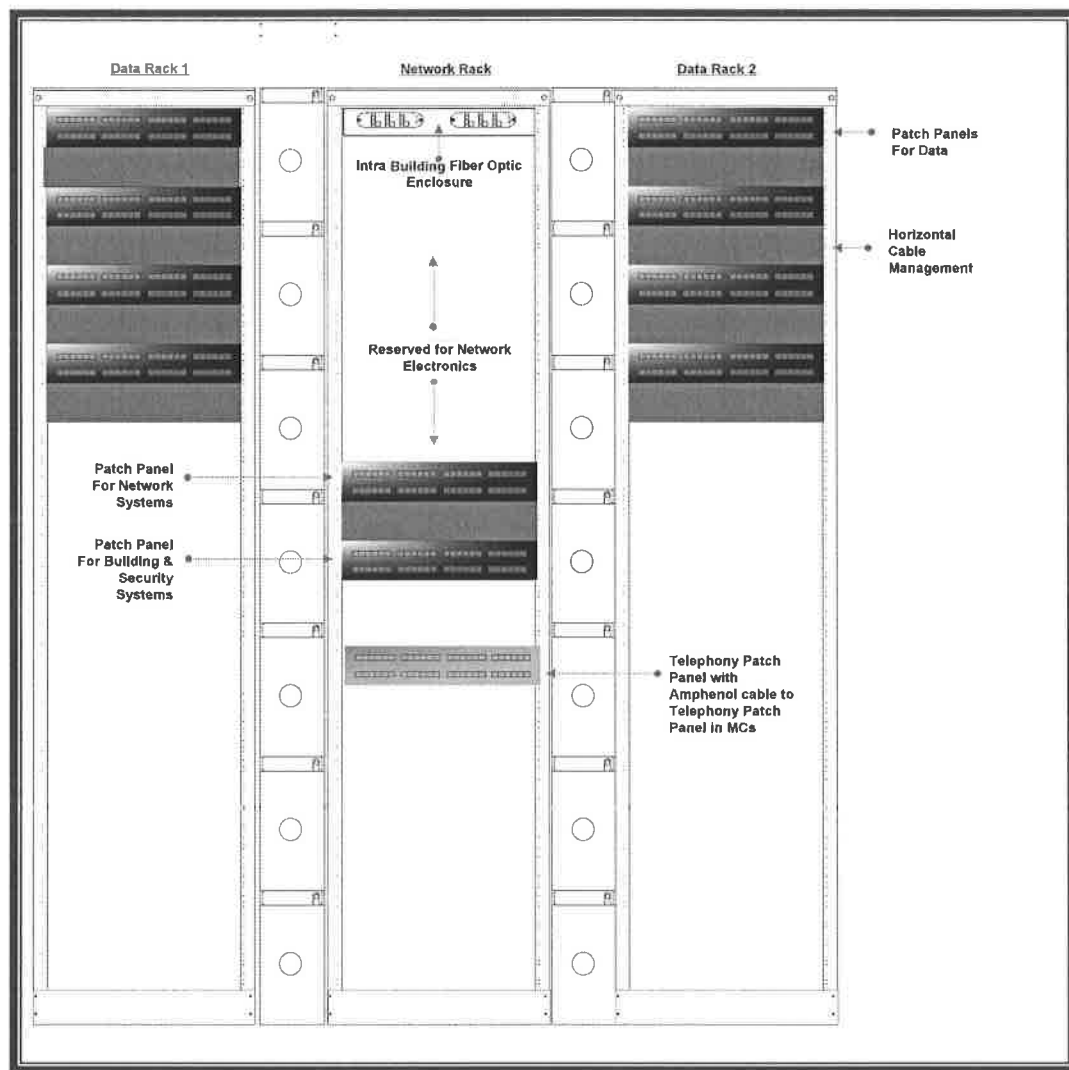


Figure 7: Sample HC Rack Layout

## **Article X. Cable Pathways**

### **Section 10.01 General**

Cable pathways and spaces must comply with TIA/EIA-568 and TIA/EIA-569.

Cable paths shall consist of a primary path above the main hallways of the building with individual drops exiting the main pathways at right angles and suspended by J-hooks towards the top of the wall above the intended drop/faceplate location.

In areas with suspended ceiling tiles, all cabling and support structures should be installed above the ceiling tiles in such a way that will not interfere with the moving or removal of ceiling tiles.

Specific attention should be paid to issues such as:

- Distance requirements for separation from EMI emitting devices and electrical equipment such as fluorescent lighting and power supplies.
- Proper supporting of cables within cable paths to prevent the weight of cables from damaging cable or other equipment.
- Proper conditioning of floor and wall penetrations to prevent damage to cable jackets while installing the cable and throughout the cable life.
- Segregation and separation of cabling in cable trays by media type and then by color of jackets for like media.

### **Section 10.02 Caveats**

All penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with all NFPA and State Fire Marshal requirements.

In no cases shall any cabling be permitted to utilize building infrastructure for support or to aid in the cable's suspension. Only systems installed specifically for the purpose of routing and managing cabling shall be utilized.

### **Section 10.03 Abandoned Cables**

Abandoned cables increase fire loading unnecessarily and if installed in plenums, can affect airflow. Therefore, the accessible portion of all abandoned communication cables shall be removed.

Prior to removal of any cables, the contractor shall obtain approval from the LSUHSC Department of Information Technology and from the LSUHSC Department of Property and Facilities Management.

### **Section 10.04 Cable Trays**

Refer to Article XIII for preferred parts list.

Cable tray shall be installed in all primary pathways (i.e., hallways).

Cable trays shall be of a wire mesh construction and be a minimum of 4" deep and 12" wide. Fill rates should not exceed 60%.

Cable trays shall be properly grounded.

Cable trays shall be installed and secured as per the manufacturer's installation instructions.

No component of the cable tray system or support structure should be mounted to the suspended ceiling support wires.

### **Section 10.05 Cable Supports**

J-hooks shall be installed in areas where the installation of cable trays is not possible or to support cables between cable trays and user work areas.

The minimum J-hook size shall be 2". Larger sizes, if necessary, shall be determined based on manufacturer's recommendations for the number of cables to be supported.

All J-hooks shall have cable retaining clips installed.

In main hallways, where possible, J-hooks shall be mounted to the wall and spaced every 4'. The distance between J-hooks in overhead areas shall not exceed 5'.

All J-hooks shall be installed and secured as per the manufacturer's installation instructions.

## Section 10.06 Conduits and Innerduct

For conduit and innerduct installations, the following best practices should be adhered to:

- Innerduct should be cut and securely fastened at all conduit junction boxes
- All conduits shall use sweeping bends for directional changes
- All conduits, tubings and innerducts shall be securely terminated on both ends with appropriate termination hardware and junction boxes
- Transitions between different types of tubing, conduit and innerduct shall be made with a junction box unless a special adapter designed for such purpose is available
- All empty innerducts and unfilled conduits shall contain pull strings to assist with future cable installations
- Conduit shall have a maximum fill capacity of 50%
- Innerduct may be filled to any capacity that can be achieved with a single pull without damaging the integrity of the cables being installed
- Conduit and tubing shall terminate in junction boxes appropriately sized for the type and quantity of cable being installed
- When using conduit greater than 2" inner diameter, innerduct shall be used within the entire length of the conduit unless a shielded cable is used
- When 4" conduit is installed, it should be completely filled with innerduct

Conduits and innerducts shall be clearly labeled on the exterior surface, at least every 50'.

Conduits and innerduct labels shall include a unique identification that identifies the origination and destination, such as RCB719-LEC230-1 signifying the 1<sup>st</sup> conduit originating in the Resource Center Building, room 719, and terminating in room 230 in the Lions Eye Center.

Labeling shall consist of black letters, at least 1.5" – 2" high, on a white or yellow background.

Labels should be self-adhesive labels suitable for indoor and outdoor installations.

Conduit sizing shall be based on cable capacity as per the manufacturer's recommendations.

Conduit installations in areas where the presence of an electrolyte, such as water or moisture containing small amounts of acid are likely to be present, appropriate measures shall be taken to ensure that dissimilar metals do not come in contact with one another in order to prevent corrosion of metals.

Refer to the table 2 below regarding metals that corrode when in the presence of an electrolytic and in contact with another metal.

The Galvanic Series			
1	Aluminum	7	Tin
2	Zinc	8	Lead
3	Steel	9	Brass
4	Iron	10	Copper
5	Nickel	11	Bronze
6	Stainless Steel 400 Series	12	Stainless Steel 300 Series

Table 2: The Galvanic Series

## **Article XI. Fiber Optic Cabling**

### **Section 11.01 General**

All fiber optic backbone cabling shall be installed in a star (hub-and-spoke) topology in compliance with TIA/EIA-568.

### **Section 11.02 Caveats**

All fiber optic cables must be installed, handled, routed and terminated as per the manufacturer's installation instructions. Special attention shall be paid to the pulling tension and bend radius limitations for each cable.

### **Section 11.03 Splice Points**

The LSUHSC Department of Information Technology has established two splice points on the downtown campus, each having available single-mode fiber optics, to the Resource Center Building which acts as the hub in the downtown campus star topology.

Splice points are established in the following locations:

- Walk-to-Wellness (East end of walkway in ceiling area of Entergy Garage)
- Walk-to-Wellness (West end in Seton Building Elevator / Mechanical closet)

All new building construction on the downtown campus shall attempt to utilize these existing resources.

### **Section 11.04 Installation Techniques**

Fiber optic cabling must be completely encapsulated for the entire length of the cable run. Acceptable encapsulation types are aluminum armor cladding, innerduct, rigid metallic conduit, electrical metallic tubing, flexible metallic tubing, or other suitable enclosure that meets the requirements of the installation.

Different types of encapsulation materials may be required in different areas to accommodate intra-building, inter-building, or plenum space requirements.

Grounding requirements shall be adhered to for each applicable encapsulation type.

### **Section 11.05 Fiber Optic Service Loops**

Fiber optic cables shall be provided with a 25' long service loop per end for a total of 50' per fiber optic cable.

Fiber optic service loops shall be securely mounted to the wall in the cross-connects.

### **Section 11.06 Inter-building**

Inter-building backbone cabling shall consist of a minimum of 24-strands of single-mode fiber optic cabling.

Inter-building fiber shall be indoor/outdoor rated fiber.

Depending upon the geographic location of the building being served, as well as its logical relationship to the campus environment, the number and type of strands may be increased.

### **Section 11.07 Intra-building**

Intra-building riser cabling shall consist of a minimum of 24-strands of single-mode fiber optic cabling.

### **Section 11.08 Termination**

All single-mode and multimode terminations shall have SC connectors.

## Section 11.09 Testing

Each fiber strand shall be tested with an OTDR to verify installed cable length and all points of dB loss.

OTDR must have been calibrated within past year by accredited lab or by the original equipment manufacturer. Certification of last calibration date shall be made available upon request.

Fusion splice loss shall not exceed 0.2 dB and connector loss shall not exceed 0.5 dB.

Testing shall be performed in both directions on each strand.

## Section 11.10 Labeling

All fiber optic cables shall have a self-laminating plastic tag affixed with tie wraps (plenum or non-plenum as necessary) every 50' unless it the cable is encapsulated in a conduit or innerduct.

All fiber optic cables shall have a cable tag affixed before the cable enters any conduit or innerduct and within any pull box, junction box, or hand-hole where the fiber is exposed.

Fiber optic cable tags shall include a unique identifier neatly printed in a permanent marker.

This unique identifier shall be constructed in such a way as to easily identify the type of fiber optic cable, strand count and origination cross-connect and destination cross-connect. Refer to Figure 8 for a sample fiber optic identifier.

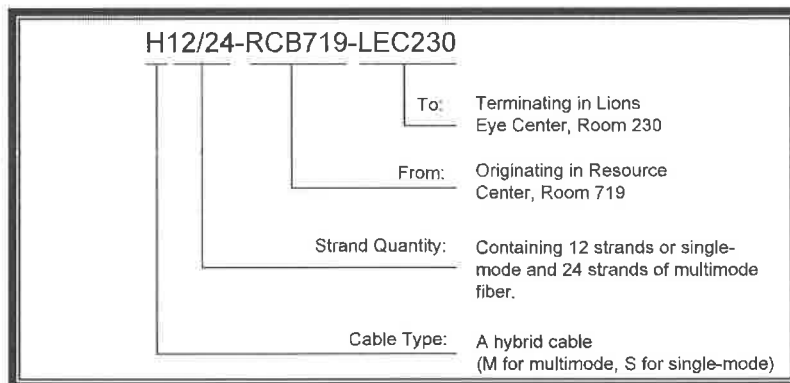


Figure 8: Fiber Optic Identifier

## Article XII. UTP Cabling

### Section 12.01 General

Refer to Article XIII for preferred parts list.

At a minimum, all UTP cabling components, including cables, connectors, and patch cables, must exceed the ANSI/TIA Category 6 standard. As more and more applications and data flows require higher bandwidth, the need for Category 6a UTP cabling should be evaluated. Therefore, LSUHSC Department of Information Technology shall be consulted to verify the UTP cabling component requirements for each installation.

TIA/EIA 1179 recommends that healthcare facilities install Category 6a.

Standard colors for UTP cabling have been adopted to easily identify cable usage.

### Section 12.02 Caveats

UTP cables must be installed, handled, routed, and terminated as per the manufacturer's installation instructions. Special attention shall be paid to the pulling tension and bend radius limitations for each cable.

UTP cables shall not be painted (oil or water based) or be installed in the presence of water.

UTP cables shall not be spliced.

### Section 12.03 Penetrations

All penetrations through fire or smoke rated barriers shall be sealed with a fire stopping compound complying with NPFA and State Fire Marshal requirements.

If conduit is not provided to the outlet box location, all penetrations through office wall top plates should have a collar or similar device installed to prevent damage to the UTP cable jacket.

### Section 12.04 Horizontal UTP Cables

The maximum length of a horizontal UTP cable, between the faceplate in the work area and patch panel in the HC, shall not exceed 295'.

UTP cables shall terminate at a patch panel in the cross-connect and at a faceplate on the same floor as the work area being served. UTP cables that terminate in floor boxes and which route through the slab may be terminated on the floor below to avoid distance limitations.

UTP cables shall be colored to easily identify usage as specified in Table 3.

### Section 12.05 Horizontal UTP Cable Service Loops

No service loops shall be installed.

### Section 12.06 Modular Connectors

Refer to Article XIII for preferred parts list.

Modular connectors shall (as close as possible) match the color of the UTP cable as specified in Table 3.

### Section 12.07 Patch Cables

Refer to Article XIII for preferred parts list.

The maximum length of a patch cable in the work area shall not exceed 16'.

The Contractor shall provide appropriately sized patch cable for all cross-connect drops. Patch cables shall be sized to minimize excess cable length in the vertical managements.

The patch cables shall (as close as possible) match the color of the modular connector as specified in Table 3.

<u>UTP Cable / Modular Connector / Patch Cable</u>	<u>Usage</u>
Blue / Blue / Blue	Primary Data
Blue / Blue / Blue	Spare Data
Violet / Violet / Violet	Special Purpose – Networking
Orange / Orange / Orange	Special Purpose – Building Systems
Green / Green / Green	Special Purpose – Passive PoE
Yellow / Yellow / Yellow	Special Purpose – AV NVX

**Table 3: UTP Cable / Modular Connector and Patch Cable Color Code**

### Section 12.08 Faceplates

Refer to Article XIII for preferred parts list.

The color of the faceplates shall match wall colors and shall support a minimum of four modular jacks.

Faceplates mounted on walls shall utilize recessed insert and non-shuttered jacks, installed in a downward facing orientation to prevent the accumulations of dust and debris within the modular jack and on the pin contacts.

Installations shall be such that the bottom of the faceplate is parallel to the floor surface and the sides of the faceplate are perpendicular to the floor surface.

All unused faceplate ports shall have blank inserts installed.

Faceplates mounted on horizontal surfaces shall include shuttered modular jacks to prevent the accumulation of dust and debris within the jack and on the pin contacts.

Faceplates shall be separated from Electrical outlets by a minimum of 6".

Faceplates shall have machine printed labels and plastic label covers. Labels shall be in compliance with TIA/EIA-606.

Faceplates in work areas shall be labeled with the room number, jack number, and the jack position. Refer to Figure 9 for jack positions. If multiple faceplates exist within the same room, faceplates jack numbers shall be sequentially numbered in a clockwise manner. This should begin with the first faceplate to the left of the main doorway as you enter the room. The main doorway is the one that provides access to a common area, such as a hallway or lobby.

Faceplate labels in office work areas shall be white with black lettering. Faceplate labels in public areas (i.e. auditoriums, conference rooms, etc) shall be green with black lettering. LSUHSC Department of Information Technology shall determine areas that are to be considered public areas for the purpose of labeling.

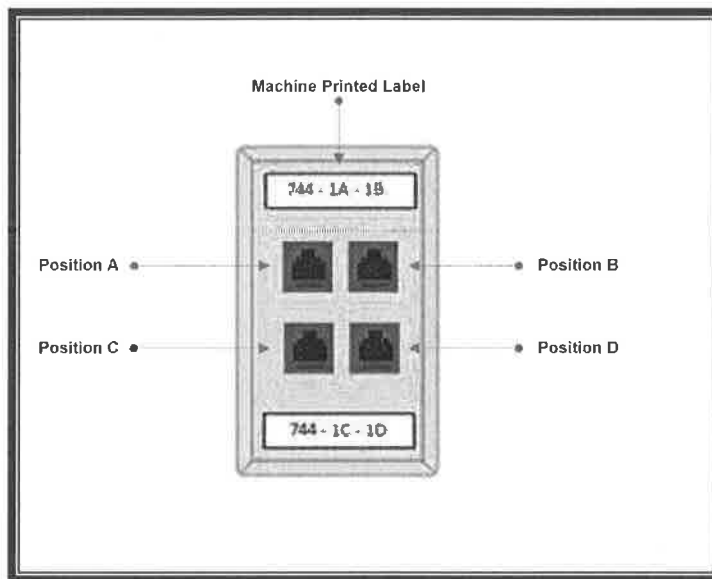


Figure 9: Faceplate Jack Positions

Faceplates for Special Systems shall be labeled with the room number, system code and jack number. Refer to Table 4 for defined system codes

Name of System	Abbreviation
Access Points	AP
Digital Signs	DS
Environmental Monitoring Systems	ENV
Access Controls	AC
Security Systems (Cameras, NVRs, etc.)	SEC

Table 4: System Codes

## Section 12.09 Cable Bindings

Cable bindings (straps, tie wraps, etc) should be irregularly spaced and should be loosely fitted (easily moveable).



## Section 12.10 Terminations

UTP cable runs should be terminated using modular connectors on both ends.

Eight position jack pin/pair assignments will comply with T568A termination standards.

## Section 12.11 Testing

All testing shall be in compliance with TIA/EIA-568.

UTP cables shall be tested at the appropriate frequency for the cable type and tests shall provide at a minimum, wire mapping, cable length, insertion loss, return loss, propagation delay, NEXT, power sum NEXT, ACR-F, power sum ARC-F, ARC-N, and power sum ARC-N.

UTP cable test result shall "PASS". Any "MARGINAL PASS" test result shall not be acceptable and shall require re-termination.

Certification of last date and time of calibration to manufacturer's requirements for all test instruments shall be made available upon request.

Any test instrument utilized must be compliant and shall not allow marginal results to be hidden.

Test results shall be saved and submitted electronically to the building owner and LSUHSC Department of Information Technology upon completion of the installation. Format for electronic submission of test results shall be in a file format mutually agreed to by the contractor and LSUHSC Department of Information Technology.

## Section 12.12 Documentation

Documentation shall be submitted in mutually compatible electronic format and must include:

- As-built drawings depicting the path of all backbone and vertical cabling as well as the primary path cable trays for horizontal cabling.
- As-built documentation of all floor plans for HCs including physical location of racks, trays, and penetrations.
- A logical representation of each patch panel including the corresponding labeling.
- Test results for every fiber optic and UTP cable installed. The test results shall be submitted in a mutually agreeable electronic format.

## Section 12.13 Standard Drop

A standard drop shall consist of two blue cables. Corresponding faceplate shall have two blue modular jacks oriented as follows:

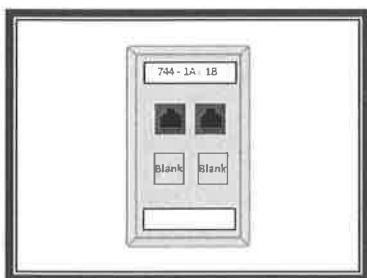


Figure 10: Standard Drop

## Section 12.14 Non-Standard Drop

A non-standard drop in a typical office area may consist of one or as many as four blue cables. Corresponding faceplates shall have the corresponding number of blue modular jacks oriented as follows:

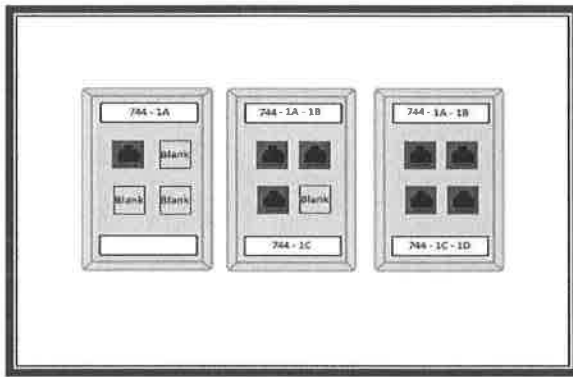


Figure 11: Non-Standard Drop Options

### Section 12.15 Special Purpose Drops

The following special purpose drops have been identified:

(a) AP Drop

An AP drop shall consist of one purple cable. Corresponding faceplates will have one purple modular jack color oriented as follows:

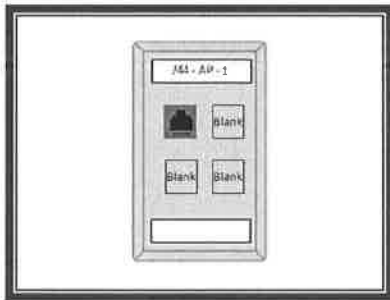
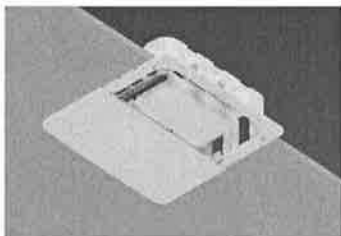


Figure 12: AP Drop

On grid/drop ceilings, AP Drop should be located above the ceiling with ceiling tile or grid marked with location of AP Drop. On non-grid/drop ceilings, AP Drop should be located inside a wireless access point enclosure which is installed and sitting recessed in the ceiling. Refer to Article XIII for preferred parts list.



(b) Digital Sign Drop

A Digital Sign drop shall consist of three purple cables. Corresponding faceplates will have three purple modular jacks oriented as follows:

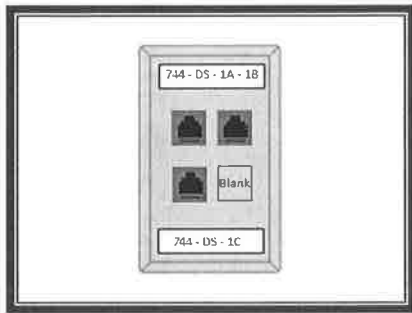


Figure 13: Digital Sign Drop

(c) HVAC, Access Control, and Security Appliance Drops

All HVAC environment monitoring, access control, and security drops shall consist of a minimum of one orange cable. Corresponding faceplates will have one orange modular jack oriented as follows:

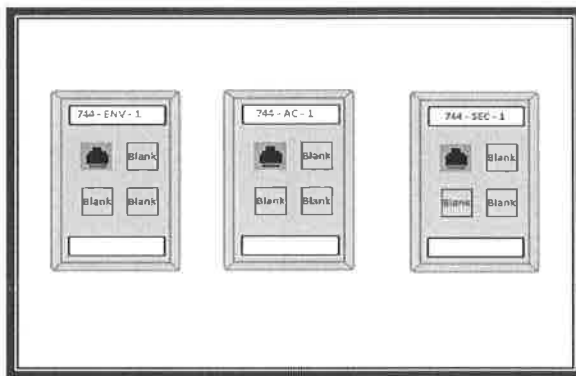


Figure 16: HVAC, Access Control and Security Appliance Drops

## Article XIII. Preferred Parts List

**Brand Name Disclaimer:** The cable plant constitutes the lowest layer of the OSI network model - the physical layer. As such, it is the foundation of the network, used to transport all data, voice, video, access control and environmental monitoring systems to their destinations.

As more and more systems traverse this physical layer, reliability becomes key. And to ensure this reliability, we need to ensure compatibility between products which comprise this system so that we can avoid any interoperability issues.

Within this document, many components are specified by Manufacturer, Part Number and/or Brand Name. These are the parts that have been adopted by LSUHSC not only due to interoperability but also because they exceed all ANSI TIA/EIA specifications. The LSUHSC "in-house" wiring group has been trained to install and support these products. To deviate from using these parts would require significant investment for additional training, tools and a separate spares inventory to support the new products. It is highly recommended that all installations utilize these specific brands to maintain compatibility and interoperability with the existing installed systems.

To help maintain reliability at the physical layer, all deviations from the LSUHSC preferred brands should conform to the minimum product specifications outlined within this document.

### **Section 13.01 Cable Management**

Part Number	Manufacturer	Item Description
30163-703	Chatsworth	CCS, Double-Sided for 3"D Racks, 7 x 10 x 12.24 (2.1 x 250 x 310)
30530-719	Chatsworth	UHCM, Double-Sided, 2U x 19 x 11.73 (297)

### **Section 13.02 Cable Runway**

Part Number	Manufacturer	Item Description
10250-718	Chatsworth	18" Universal Cable Runway
10487-701	Chatsworth	Butt-Swivel Splice Kit
10488-701	Chatsworth	Junction Swivel Splice Kit
10489-701	Chatsworth	Vertical Swivel Splice Kit
10506-706	Chatsworth	Elevation Kit
10595-718	Chatsworth	Rack-to-Runway Mounting Kit
10642-001	Chatsworth	Protective End Caps For Runway
11301-701	Chatsworth	Butt-Splice Kit
11302-701	Chatsworth	Junction-Splice Kit
11303-000	Chatsworth	J-Bolt Kit
11310-001	Chatsworth	Threaded Ceiling Kit
11421-718	Chatsworth	Wall Angle Support Kit
11746-718	Chatsworth	Triangular Support Bracket, Steel
11959-715	Chatsworth	Cable Runway Corner Bracket
12100-718	Chatsworth	Cable Runway Radius Drop

### **Section 13.03 Cable Wraps**

Part Number	Manufacturer	Item Description
AX100783	Belden	Velcro Cable Ties, 25 per Roll, 8"
AX100784	Belden	Velcro Cable Ties, 25 per Roll, 12"

### **Section 13.04 Cable Tray and Support**

Part Number	Manufacturer	Item Description
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Caddy CAT32	Erico	J-Hook
CF 105/300EZ	Cablofil	Cable Tray
PRECLICK	Cablofil	Preclick Splice
SWK	Cablofil	Splice Washer Kit
FASPCH 450	Cablofil	Support - Hanging

### **Section 13.05 Faceplates**

Part Number	Manufacturer	Item Description
AX106629	Belden	Faceplates – 2 port, Angled, Single-gang Gray
AX106630	Belden	Faceplates – 2 port, Angled, Single-gang Almond
AX104483	Belden	Faceplates – 2-port, Angled inserts, Gray
AX102412	Belden	Faceplates – 2-port, Angled inserts, Almond
AX107026	Belden	Faceplate Blank Module, Gray
AX102261	Belden	Faceplate Blank Module, Almond
4108W-OSP	Leviton	QuickPort Telephone Wall Jack, stainless steel

### **Section 13.06 Fiber Optics**

Part Number	Manufacturer	Item Description
024E81-33131-A1	Corning	Indoor Fiber Optics (Riser) – Single-mode
024E88-33131-A3	Corning	Indoor Fiber Optics (Plenum) – Single-mode
024E8F-31131-A1	Corning	Indoor/Outdoor Fiber (Riser) - Single-mode
024E8P-31131-A3	Corning	Indoor/Outdoor Fiber (Plenum) - Single-mode
024T81-33190-A1	Corning	Indoor Fiber Optics (Riser) – Multimode
024T88-33190-A3	Corning	Indoor Fiber Optics (Plenum) – Multimode
95-051-41-SP-X	Corning	Anaerobic Connector, SC, Multimode
95-201-41-SP	Corning	Anaerobic Connector, SC, Single-mode
CCH-01U	Corning	Closet Connector Housings - 1U
CCH-02U	Corning	Closet Connector Housings - 2U
CCH-03U	Corning	Closet Connector Housings - 3U
CCH-04U	Corning	Closet Connector Housings - 4U
CCH-CP12-59	Corning	Connector Panel, SC Single-mode
CCH-CP12-59-P03RH	Corning	Pigtailed Panel, SC Single-mode
CCH-CP12-E7	Corning	Connector Panel, SC Multimode
CCH-CP12-E7-P03SH	Corning	Pigtailed Panel, SC Multimode

CCH-UCC-KIT	Corning	Cable Clamp for Housing (Strain Relief for 3U & 4U)
CPP-UCC-KIT	Corning	Cable Clamp for Housing (Strain Relief for 1U & 2U)
HDWR-GRND-KIT	Corning	Hardware Grounding Kit for Armored Cables

### **Section 13.07 Grounding Busbar**

Part Number	Manufacturer	Item Description
13622-012	Chatsworth	12" TGB Pattern
40153-012	Chatsworth	12" TMGB Pattern
40162-901	Chatsworth	#6 AWG Two-Hole Compression Lug
40162-957	Chatsworth	#2 AWG Two-Hole Compression Lug

### **Section 13.08 Labels**

Part Number	Manufacturer	Item Description
PST-FO	Panduit	Self-Laminating Fiber Optic Cable Marker Tag
PST-FOBLNK	Panduit	Self-Laminating Fiber Optic Cable Marker Tag

### **Section 13.09 Modular Jacks**

Part Number	Manufacturer	Item Description
RV6MJKUBL-S1	Belden	REVCONNECT Cat6+ Blue
RV6MJKUIV-S1	Belden	REVCONNECT Cat6+ Ivory
RV6MJKUPR-S1	Belden	REVCONNECT Cat6+ Purple
RV6MJKUOR-S1	Belden	REVCONNECT Cat6+ Orange
RV6MJKUYL-S1	Belden	REVCONNECT Cat6+ Yellow
RVAMJKUBL-S1	Belden	Category 6A Jack (Blue)
RVAMJKUIV-S1	Belden	Category 6A Jack (Ivory)
RVAMJKUPR-S1	Belden	Category 6A Jack (Violet)
RVAMJKUOR-S1	Belden	Category 6A Jack (Orange)
RVAMJKUYL-S1	Belden	Category 6A Jack (Yellow)

### **Section 13.10 Patch Cables**

Part Number	Manufacturer	Item Description
C001106007	Belden	Cat6+ Modular Patch Cord 7" Blue

C601109007	Belden	Cat6+ Modular Patch Cord 7" White
C601103007	Belden	Cat6+ Modular Patch Cord 7" Orange
C601107007	Belden	Cat6+ Modular Patch Cord 7" Purple
C601104007	Belden	Cat6+ Modular Patch Cord 7" Yellow
CA21106007	Belden	Category 6A Modular Patch Cords 7" Blue
CA21109007	Belden	Category 6A Modular Patch Cords 7" White
CA21103007	Belden	Category 6A Modular Patch Cords 7" Orange
CA21107007	Belden	Category 6A Modular Patch Cords 7" Purple
CA21104007	Belden	Category 6A Modular Patch Cords 7" Yellow

### **Section 13.11 Patch Panels**

Part Number	Manufacturer	Item Description
808004389	Ortronics	Telephony Patch Panel - 24 ports
AX103114	Belden	KeyConnect Modular Patch Panel, 24-port, 1U
AX103115	Belden	KeyConnect Modular Patch Panel, 48-port, 2U
AX104601	Belden	KeyConnect Angled Patch Panel, 48-port, 2U

### **Section 13.12 Standard Rack**

Part Number	Manufacturer	Item Description
55053-703	Chatsworth	3" Deep Standard Rack, 7 (2.1) x 19", 45U

### **Section 13.13 Surface Mount Raceway**

Part Number	Manufacturer	Item Description
LD10EI8-A	Panduit	8' Low Voltage 1-piece Single Channel Raceway, .38 in <sup>2</sup> , (Electric Ivory)
LD10IG8-A	Panduit	8' Low Voltage 1-piece Single Channel Raceway, .38 in <sup>2</sup> , (International Gray)
LD5EI8-A	Panduit	8' Low Voltage 1-piece Single Channel Raceway, 1.00 in <sup>2</sup> , (Electric Ivory)
LD5IG8-A	Panduit	8' Low Voltage 1-piece Single Channel Raceway, 1.00 in <sup>2</sup> , (International Gray)
DCF10EI-X	Panduit	Drop ceiling fitting for use with LD10 raceway (Electric Ivory)
DCF10IG-X	Panduit	Drop ceiling fitting for use with LD10 raceway (International Gray)
DCF5EI-X	Panduit	Drop ceiling fitting for use with LD5 raceway (Electric Ivory)
DCF5IG-X	Panduit	Drop ceiling fitting for use with LD5 raceway (International Gray)

JBX3510EI-A	Panduit	Low Voltage Surface Mount Outlet Boxes (Electric Ivory)
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### **Section 13.14 UTP Cabling**

Part Number	Manufacturer	Item Description
2413 D15A1000	Belden	CAT6+ Horizontal, 4pr, UTP, LS-PVC Jkt, CMP (Blue)
2413 003A1000	Belden	CAT6+ Horizontal, 4pr, UTP, LS-PVC Jkt, CMP (Orange)
2413 007A1000	Belden	CAT6+ Horizontal, 4pr, UTP, LS-PVC Jkt, CMP (Purple)
2413 004A1000	Belden	CAT6+ Horizontal, 4pr, UTP, LS-PVC Jkt, CMP (Yellow)
10GX13 D151000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Blue)
10GX13 0031000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Orange)
10GX13 0071000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Purple)
10GXS13 0041000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Yellow)
10GXS13 0041000	Belden	CAT6A 10GX, 4pr, UTP, LS-PVC Jkt, CMP (Yellow)

### **Section 13.15 Wireless Access Point Enclosures**

Part Number	Manufacturer	Item Description
1019-RM	Oberon	Wireless Access Point Enclosure (White)

### **Section 13.16 Wireless Access Point Wall Mounting Bracket**

Part Number	Manufacturer	Item Description
ENBRKT	Tripp Lite	Universal Wall Bracket for Wireless access point mounting, right angle, steel, white



## EXHIBIT A

### INSURANCE REQUIREMENTS FOR CONTRACTORS

The Contractor shall purchase and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, its agents, representatives, employees or subcontractors.

#### **A. MINIMUM SCOPE AND LIMITS OF INSURANCE**

1. **Workers Compensation**

Workers Compensation insurance shall be in compliance with the Workers Compensation law of the State of the Contractor's headquarters. Employers Liability is included with a minimum limit of \$1,000,000 per accident/per disease/per employee. If work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act, or other maritime law coverage shall be included. A.M. Best's insurance company rating requirement may be waived for workers compensation coverage only.

2. **Commercial General Liability**

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations, shall have a minimum limit per occurrence of \$1,000,000 and a minimum general annual aggregate of \$2,000,000. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable.

3. **Automobile Liability**

Automobile Liability Insurance shall have a minimum combined single limit per accident of \$1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non-owned automobiles.

#### **B. DEDUCTIBLES AND SELF-INSURED RETENTIONS**

Any deductibles or self-insured retentions must be declared to and accepted by the Agency. The Contractor shall be responsible for all deductibles and self-insured retentions.

#### **C. OTHER INSURANCE PROVISIONS**

The policies are to contain, or be endorsed to contain, the following provisions:

1. Commercial General Liability and Automobile Liability Coverages

- a. The Agency, its officers, agents, employees and volunteers shall be named as an additional insured as regards negligence by the contractor. ISO Forms CG 20 10 (for ongoing work) AND CG 20 37 (for completed work) (current forms approved for use in Louisiana), or equivalents, are to be used when applicable. The coverage shall contain no special limitations on the scope of protection afforded to the Agency.
- b. The Contractor's insurance shall be primary as respects the Agency, its officers, agents, employees and volunteers for any and all losses that occur under the contract. Any insurance or self-insurance maintained by the Agency shall be excess and non-contributory of the Contractor's insurance.

2. Workers Compensation and Employers Liability Coverage

To the fullest extent allowed by law, the insurer shall agree to waive all rights of subrogation against

the Agency, its officers, agents, employees and volunteers for losses arising from work performed by the Contractor for the Agency.

3. All Coverages

- a. All policies must be endorsed to require 30 days written notice of cancellation to the Agency. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy. In addition, Contractor is required to notify Agency of policy cancellations or reductions in limits.
- b. The acceptance of the completed work, payment, failure of the Agency to require proof of compliance, or Agency's acceptance of a non-compliant certificate of insurance shall not release the Contractor from the obligations of the insurance requirements or indemnification agreement.
- c. The insurance companies issuing the policies shall have no recourse against the Agency for payment of premiums or for assessments under any form of the policies.
- d. Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Agency, its officers, agents, employees and volunteers.

**D. ACCEPTABILITY OF INSURERS**

1. All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of **A-:VI or higher**. This rating requirement may be waived for workers compensation coverage only.
2. If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another Certificate of Insurance within 30 days.

**E. VERIFICATION OF COVERAGE**

1. Contractor shall furnish the Agency with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Agency before work commences and upon any contract renewal or insurance policy renewal thereafter.
2. The Certificate Holder Shall be listed as follows:  
  
State of Louisiana  
Agency Name, Its Officers, Agents, Employees and Volunteers  
Address, City, State, Zip  
Project or Contract #:
3. In addition to the Certificates, Contractor shall submit the declarations page and the cancellation provision for each insurance policy. The Agency reserves the right to request complete certified copies of all required insurance policies at any time.
4. Upon failure of the Contractor to furnish, deliver and maintain required insurance, this contract, at the election of the Agency, may be suspended, discontinued or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

**F. SUBCONTRACTORS**

Contractor shall include all subcontractors as insureds under its policies OR shall be responsible for verifying and maintaining the Certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Agency reserves the right to request copies of subcontractor's Certificates at any time.

**G. WORKERS COMPENSATION INDEMNITY**

In the event Contractor is not required to provide or elects not to provide workers compensation coverage, the parties hereby agree that Contractor, its owners, agents and employees will have no cause of action against, and will not assert a claim against, the State of Louisiana, its departments, agencies, agents and employees as an employer, whether pursuant to the Louisiana Workers Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the State of Louisiana, its departments, agencies, agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its owners, agents and employees. The parties further agree that Contractor is a wholly independent contractor and is exclusively responsible for its employees, owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the State of Louisiana, its departments, agencies, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

**H. INDEMNIFICATION/HOLD HARMLESS AGREEMENT**

1. Contractor agrees to protect, defend, indemnify, save, and hold harmless, the State of Louisiana, all State Departments, Agencies, Boards and Commissions, its officers, agents, servants, employees, and volunteers, from and against any and all claims, damages, expenses, and liability arising out of injury or death to any person or the damage, loss or destruction of any property which may occur, or in any way grow out of, any act or omission of Contractor, its agents, servants, and employees, or any and all costs, expenses and/or attorney fees incurred by Contractor as a result of any claims, demands, suits or causes of action, except those claims, demands, suits, or causes of action arising out of the negligence of the State of Louisiana, all State Departments, Agencies, Boards, Commissions, its officers, agents, servants, employees and volunteers.
2. Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits, or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent. The State of Louisiana may, but is not required to, consult with the Contractor in the defense of claims, but this shall not affect the Contractor's responsibility for the handling of and expenses for all claims.